

# Service delivery models and repeat requests for emergency relief

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social science leadership for a better world

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## EXECUTIVE SUMMARY

This second milestone report, commissioned by the St Vincent de Paul Society Queensland, builds on the evidence and findings from the first report (ISSR021235) and the questions that it raised. This research addresses these significant challenges through the provision of much needed evidence on 'what works', 'how much it works' and 'under what conditions it works' (Department of Social Services 2017). In doing so, this research contributes to pioneering pragmatic solutions to unsettle the current patterns of hardship and suffering that too many people experience. In particular, we asked does the service delivery mode of responding to emergency relief requests make a difference to the disadvantaged the Society serves?

This study uses a mixed-methods approach to examine what different emergency relief service delivery modes are associated with fewer repeat requests for emergency relief. Specifically, this study compares the support centre and home visit models. Two stages of the analysis were conducted on data in the online SOL database, which contains records of some 440,000+ interactions between Vincentians and those requesting emergency relief. A further stage of qualitative fieldwork engaged Vincentians who had experience of both home visits and the support centre modes of service delivery.

The quantitative evidence presented in this study indicates that throughout the State of Queensland, the largest State/Territory in Australia by number of emergency relief requests for assistance (according to DSS DEX data), the time spent at *support centres*, while relatively brief, corresponds to markedly lower mean repeat requests. That is, a 49% reduction in the mean requests per person for a one hour increase in time Vincentians spend with a person, other things held constant.

An in-depth investigation into two conferences which had changed from a home visit model of service delivery to a support centre model, provided some additional evidence which corroborates this general finding. In particular, it shows the support centre model corresponds to an estimated 14% to 29% fewer mean requests per person over the last 30 days, in the long-run, statistically significant at the 5% level. Further, the results also show an estimated 30% and 64% reduction, in the long-run, in mean requests per person over the last 90 and 360 days respectively, statistically significant at the 5% level.

These results point to: (1) some context-specific reasons why for some support centres this may actually be the case (e.g. limited parking, a lack of private space to speak with people receiving assistance and concerns for personal safety); and (2) implied pressure that clients may feel pressure to demonstrate the worthiness of their request for help. It follows that greater efforts may be required to remove the ingredients for the notion of the deserving poor to unwittingly permeate interactions between service providers and the people they aim to help. For service providers, this is a case of strengthening an already longstanding moral commitment.

At face value the findings suggest that the support centre mode is more effective in reducing repeat requests. However, the Vincentians we engaged in this study could not definitively say which service delivery mode lead to the best results for those requesting emergency relief. We are certain the issue is more complex than this still, and there is still a critical need for both modes to best meet the needs of those experiencing poverty. Context and personal circumstance, as we evidence, impact which service delivery mode seems to work best in particular circumstances.

Again, the findings reported in this study raise as many questions as they answer. We look forward to building on the body of evidence that this unique research partnership between The University of Queensland's Institute for Social Science Research and the St Vincent de Paul Society Queensland, with further reports in this series, in a mutually shared goal of tackling the problem of deep and persistent social and economic disadvantage in our communities. We are delighted to present this second iteration in our on-going series of reports from our research, and hope this will stimulate further discussion within the Society and feedback to the research partnership team.

## **1 INTRODUCTION**

In this second milestone report, another in a series research reports that ambitiously aims to better understand and shape the way faith-based charities serve the poor, the research focus turns to an evaluation of charitable service delivery modes, and their impact on the disadvantaged in our communities, provided by the St Vincent de Paul Society Queensland. This is a timely focus for research for the Society given the Australian Government's Department of Social Services is currently engaging in a suite of research and consultation aimed at scoping the feasibility of geographically-centred social service-integrated hubs (Department of Social Services 2017). As the only Australian charity who's on-the-ground volunteer-led services model is largely predicated on the home-visit, these developments could be a major challenge to the tradition, culture, modus operandi, organisational structure, administration and management of Vincentians and the Society's staff and leadership team. In a departure from the methods underpinning the first report, the research team augmented analysis of the SOL database records with fieldwork, directly engaging the frontline Vincentians who had experiences of both the home visitation and support centre service delivery modes. The voices of these Vincentians bring to life the findings in this report and bring a human touch to the reportage of the Society's 'Good Works'.

The first report revealed some evidence, the first of its kind to our knowledge, which revealed the triggers for requests for charity, and the potential impacts on recipients of the manner in which emergency relief interactions are transacted. The two headline findings from the first report were that:

- moving address was a significant predictor of requests for emergency assistance. In fact, requests for *inter alia* food, clothing and furniture can be understood to be a proxy for the significant disruption and distress that housing insecurity for individuals and families living on the edge entails.

- the time a volunteer spends providing charity is associated with an individual making fewer repeat request for charity. We interpret this as a positive result, in that the longer interaction allows Vincentians to more fully understand the clients need for charity and tailor support and referrals to address the underlying issue, rather than assuming that material assistance, in the shape of food or clothing, will be sufficient.

This second report engaged with, and advanced, some of the questions that arose from the key findings listed above. As we discovered many of the clients that present for emergency relief at the support centre we conducted the fieldwork in, are actually homeless or precariously housed in boarding houses or shelters. Similarly, while the first study identified 'time spent with the client' as a critical factor we were left with the question 'what is it that is important about the passage of time?' For this study, we were able to gain deeper insights to better understand these, and other, questions.

The emergency relief services provided by the Society's volunteers are primarily delivery through the traditional home visit model. However, in some cases these services are delivered through a drop-in or support centre model. Occasionally conferences provide emergency relief services in some combination of the two. Nonetheless, the differences between these two service delivery models is the focus of this study. In particular, this study examines what different emergency relief service delivery modes are associated with fewer repeat requests for emergency relief... It is reasoned that repeat requests represent evidence of a continued dire need while not making (or making fewer) repeat requests represents an absence (or lessening) of that need; our approach is in line with longstanding measures used to evaluate the effectiveness of service delivery models (Winter and Cree 2016). To do this a three-staged mixed methods approach is used.

(1) In the first stage, we used administrative data recorded by the Society. The data contains information on interactions from the 1st of January 2009 to the 30th of November 2016 (the most recent data available). To model conference level data on repeat requests for emergency relief a Poisson quasi-maximum likelihood estimator (QMLE) with continuous endogenous covariates estimated using the generalised method of moments (GMM) estimator is employed.

(2) In the second stage we also used administrative data recorded by the Society. In this stage the requests per person over the past 30, 90, 180 and 360 days of two conferences (organised groups of volunteers, based around local parishes and churches) are studied in detail.

(3) In the third stage, we undertook semi-structured interviews with Vincentians. These Vincentians were recruited from an inner-city conference and a metropolitan conference, both in a large Queensland metropolis. Herein these are labelled St Francis and St Benedict, respectively<sup>1</sup>. The purpose of these interviews is to identify how Vincentians understand that the two modes of service delivery – home visits and support centres – contributes to repeat requests for emergency relief. The qualitative data thus provides additional explanatory capability to augment and extend the findings of the first two stages' analyses.

Through this three staged mixed methods approach an appreciation was gleaned of what service delivery modes contributed to reduced repeat requests for emergency relief. In doing so, this study extends what is known about alternative emergency relief provision models and highlights key issues relevant to effective practice and policies surrounding emergency relief provision.

#### 1.1 **REPORT STRUCTURE**

Section 2 overviews service delivery models in the welfare and faith-based charity sectors, section 3 provides the technical details of the data and methods used in this study. Section 4 reports, in more accessible terms, the results, although there is some technical language. Section 5 again, accessibly discusses these results in relation to what we already know from the research literature, concludes with implications for policy and practice, and with future research opportunities.

<sup>&</sup>lt;sup>1</sup> The conferences are assigned pseudonyms to protect the anonymity of the interviewees.

## 2 SERVICE DELIVERY MODELS

Imagined within the framework of a socio-ecological model how effective services provided by charitable organisations and the state are in terms of alleviating poverty may be understood as a function of "...the processes and conditions that govern the lifelong course of human development in the actual environments in which people live" (Bronfenbrenner 1994, 37). From this theoretical perspective, applied elsewhere to self-sufficiency and welfare (Daugherty and Barber 2001), the context of the service delivery matters greatly. It can alter the nature of a person's lived experience, and potentially the services a person receives. For instance, the mode of service delivery may be accompanied by more/less intense feelings of humiliation or embarrassment for the person requesting help (Frederick and Goddard 2008). Conversely, how services are delivered may inadvertently engender attachment/detachment between the service provider and the recipient (Kahn 1976).

Visiting people in their home to provide social services has a long history, first by volunteers attached to local parishes providing charity, and also more recently by professional social workers delivering case management on behalf of the state (Winter and Cree 2016). The purpose of home visitations according to the Society is to provide "...support, friendship and material assistance..." and "...to help find the most appropriate response to [people's] needs..." (St Vincent de Paul Society Queensland 2018). This echoes Joan Beder's commentary on the early charitable organisations in the United States as seeing "...the purpose of home visit as used in the work of the [charitable organisation society] was essentially to investigate and to offer help" (Beder 1998, 515).

This concept of investigation has led to a degree of controversy among scholars and practitioners, revisiting longstanding questions about their effectiveness compared to support centre models (or equivalently office-based or drop-in centre models). With a particular focus on families and children, (cf. Weiss 1993, Gomby, Culross, and Behrman 1999, Treadwell 2015) finds substantial evidence that home visitation accords with improved outcomes. While these three studies evaluated government and community family and child services, Winter and Cree's (2016) study of home visits by charitable providers is rather more critical. They assert home visitation was used as a means to assess the moral worthiness of recipients, and to ensure their changed behaviours (that could be observed in the home environment). The authors explain that the home visit:

"...was grounded in an assumption that the one-to-one relationship established between the visitor and the visited was a reciprocal, though not equal, one: the visitor had, it was believed, greater knowledge, education and, of course, social class, and it was their mission to get close enough to the poor person to share what we would today refer to as 'cultural capital' " (Winter and Cree 2016, 1179).

Winter and Cree reject home visits in favour of support centre models because they see home visits as not founded in evidence. However, while their research makes a strong argument for the potential issues and risks posed by home visitation there is no evidence to support the support centre model is indeed preferable to home visitation.

Others have argued that home visitation, regardless of intent, could present a positive opportunity for those providing support to learn empathy; gain a better understanding of a person's circumstances; convey this to the person (Susan 2011); and be positively regarded by the person (Murphy, Cramer, and Joseph 2012). Further, a person's home environment, depending on the circumstances, can offer a more agreeable environment for the provision of in-situ emotional support (Frederick and Goddard 2008). The need for services providers to spend sufficient time building relationships with a person is something which may occur more easily in a person's home, depending on the particular situation. From the Munro (2011) review

of the English Child Protection System, support work is understood to be effective and a high standard of practice is enabled (cf. Forrester et al. 2013) when service providers have the time and opportunity to build human relationships with the people they provide services to. In summary, it appears, much depends on the posture of the service provider in relation to the interaction with the needy. Notwithstanding the apparent opportunities and virtues presented by home visits, common methodological problems (e.g. a limited sample size; high rates of attrition; and a simple lack of statistically significant findings in some cases) obscure their effectiveness (Treadwell 2015).

It is concerning that more research effort has not been directed towards understanding the mode of service delivery and what may work for whom and under what conditions. This is especially concerning, because people receiving emergency relief have expressed a desire for services from providers that are similarly "...individualised and personal..." (Frederick and Goddard 2008, 278); and have also expressed disappointment at the impersonal, condescending, and paternalistic delivery of charity (Frederick and Goddard 2008). Some of these criticisms are not new and may be a product of the diminished time available for people to offer more tailored responses. This is compounded by the often 'band-aid' solutions offered to address much more deeply-rooted structural problems (Kahn 1976). In terms of what home visits might mean compared to the support centre model for service delivery effectiveness, the evidence to date paints a mixed picture. This has led to calls to iteratively adapt existing home visit models; and to try and test new strategies (Gomby, Culross, and Behrman 1999). Moreover, much of the research to date has evaluated community and government programs, rather than charitable works per se. The knowledge gaps are substantial. For service delivery models that work there is a genuine need to inform practice with theorised models disciplined by data.

## 3 DATA AND METHOD

This study investigates what service delivery modes may mean for repeat requests for emergency relief. To do this, this study adopts a mixed methods approach; collecting and analysing both quantitative and qualitative data. The mixed methods strategy used is a sequential explanatory design (Creswell 2003), transitioning from: (1) a quantitative analysis of the entire State of Queensland to; (2) a more intently focused quantitative analysis of two conferences to; (3) a considered qualitative analysis of Vincentian's experiences in these two conferences in order to inform, in a strengthened and thorough manner, inferences drawn about what the two different service delivery models may mean for repeat requests for emergency relief and ultimately not need to request emergency relief assistance, or as Daugherty and Barber (2001) argue, a reorganisation of dependencies. This strategy is outlined in Figure 1 following Creswell (2003).

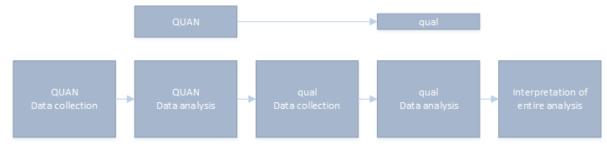


Figure 1: Mixed methods strategy outline

The three-staged approach, including the procedures used, is described in more detail in what follows.

#### 3.1 STAGE ONE

Stage one draws on administrative data recorded by the Society, in Queensland, Australia. At the time of writing 202 conferences were active; organised within regional councils, within diocesan central councils and the State council respectively. In all, a balanced panel of 79 conferences for the years 2010 to 2016 is used for the regression analysis. A balanced panel was required because spwmatrix, which was used to generate an inverse distance weighted (where  $\alpha = 1$ ) spatial weights matrix so that we may abstract from spatially omitted variables, only accommodates a balanced panel. Finally, spatial autocorrelation was investigated and the spatial lag of the repeat requests derived using splagvar.

#### 3.1.1 Stage one: The key variables

Requests are generally received initially through a Helpline and are typically made for emergency relief - immediate necessities, utilities or relocation expenses. Each of these requests may be attributable to one or more individuals; for example, an individual, a couple or a family. Conference members respond to these requests. In some cases, this can involve many visits to those in need in order to provide assistance.

Some examples of the specific types of assistance provided include; food, food vouchers, clothing, furniture, a small loan for a refrigerator or the payment of unexpected expense such medical bills. The dependent variable is the mean number of requests per person for a conference for a year. Several key groups of independent variables are included in the regression analysis; conference expenditure; conference type-specific payment expenditure; accommodation and visits. The supplementary information provides further details.

#### 3.1.2 Stage one: Estimation technique

This stage employs a Poisson quasi-maximum likelihood estimator (QMLE) with continuous endogenous covariates estimated using the generalized method of moments (GMM) estimator. This method is also known as an exponential conditional mean model in which some of the covariates are endogenous. The Poisson model is particularly well suited to nonnegative dependent variables that are count variables, which take nonnegative integers, including zero. Furthermore, it has robustness properties, yielding consistent and asymptotically normal parameter estimates. That is, whether or not the variance equals mean (e.g. the distribution is over- or under-dispersed), provided the standard errors are adjusted (Windmeijer and Silva 1997). For the dependent variables of interest the distributions are not normally distributed (see supplementary information). It is implemented using the Stata command ivpoisson in Stata/MP 14.2 (Wooldridge 2009). Throughout this study the regression errors are treated as multiplicative; the GMM estimator is used; the initial weight matrix is unadjusted and the GMM weight matrix accounts for arbitrary correlation among observations within conferences; the standard errors are adjusted for clustering within conferences; and Incident Rate Ratios (IRR) are reported throughout. All tests reported throughout this study are two-tailed tests.

#### 3.1.3 Stage one: Identification

There are many potential sources of endogeneity which threaten to confound the identification and approximation of causal impacts of the assistance provided by the Society on the degree of dependence on the Society's services. The potential for some unobserved factor (e.g. an individual's interaction with complementary or substitute local community services) to confound apparent associations is serious and could lead to incorrect inferences. This risk is mitigated by the inclusion of a spatial lag<sup>2</sup> (see supplementary information).

Simultaneity bias represents an issue by construction for spatial lags. This is because one conference may be influenced by, and may in turn influence, a neighbor conference. For this reason, it is difficult to meaningfully interpret the coefficient for this variable. This variable is included in the model to abstract from potentially confounding omitted spatial variables.

Simultaneity bias also represents an issue for the service delivery mode-specific hours per visit variables. Requests for assistance generate visits. These requests limit the amount of time spent per visit for a given the number of volunteers. To address this, the service delivery mode-specific hours per visit variables are instrumented using the first, second and third order temporal lags of the variables. This temporal ordering of events interrupts the simultaneity that would otherwise plague the results as the future cannot predict the past. The diagnostic test statistics are reported in the supplementary information. The instrumental variables pass the required tests and lend confidence to the instrumental variables. There is no evidence to indicate that the instruments are themselves endogenous (that is, the instrumental variables satisfy the exclusion restriction criterion) nor that they are weakly identified.

In addition, it is worth noting that the variance inflation factors (VIFs) provide no indication of potential multicollinearity at the conventional level of 10. As maintained elsewhere (O'Brien 2007), there has been a general overreliance on simplified rules of thumb regarding variance inflation factors (e.g. the rule of 4 or the rule of 10) in the literature. Variance inflation factors of 10, 20, 40, or even higher do not, by themselves, invalidate the results of regression analyses, rather the results need to be interpreted in context. In this study, the statistically significant results presented here survive what may be regarded in some instances as increased variance associated with the *i*th regression coefficient.

<sup>&</sup>lt;sup>2</sup> This spatial lag is derived using the user-written command splagvar. An inverse distance ( $\alpha = 1$ ) spatial weights matrix is generated for the balanced panel.

#### 3.2 STAGE TWO

Stage two draws on administrative data recorded by the Society for two conferences, for the months from 2007 to 2016 that have changed from a home visit service delivery model to a support centre model. Note, these conferences continued to conduct home visits on occasions where the person was unwell or frail. Time series analyses of requests per person over the past 30, 90, 180 and 360 days involved the use of several generalized linear models (GLM) estimated by maximum likelihood estimation with Poisson distributional family and log link. Diagnostic checks are reported (e.g. the Augmented Dickey-Fuller unit-root test and the Portmanteau (Q) test for white noise). Further, to abstract from month-specific confounders (e.g. the seasonal provision of Christmas hampers), month fixed effects are adjusted for.

#### 3.2.1 Stage two: The key variables

For both conferences, the dependent variables are requests per person over the past 30, 90, 180 and 360 days by month. The key independent variable is the support centre variable which takes a value zero while the home visit model is in effect and one when the support centre model is in effect. The other independent variables are the relevant lag terms<sup>3</sup> and month fixed effects. Trend terms are only included when, holding all other things constant, they are found to be statistically significant. The supplementary information provides further details.

#### 3.2.2 Stage two: Estimation technique

This stage employs several generalized linear models (GLM) estimated by maximum likelihood estimation with Poisson distributional family and log link, this offered a consistently superior model fit compared to the negative binomial distribution. This method is especially well suited to nonnegative dependent variables that are count variables, which take nonnegative integers, including zero. Robust standard errors and Incident Rate Ratios (IRR) are reported throughout. All tests reported throughout this study are two-tailed tests.

#### 3.2.3 Stage two: Identification

There are many potential sources of endogeneity which threaten to confound the identification and approximation of causal impacts of the assistance provided by the Society on the degree of dependence on the Society's services. There is the potential for some month-specific confounders to obscure the results (e.g. the commencement of the school year). To abstract from these potential influences, month fixed effects are included in the models. Particularly relevant to time series data are concerns regarding the stationarity of the time series which if not considered can lead to spurious results. To avoid this, the Augmented Dickey-Fuller unitroot test results are used to check all characterizations of the time series (e.g. random walk and random walk with drift). How to appropriately describe the distribution of the change process over time is arrived at through the investigation of autocorrelation plots and partial autocorrelation plots (McDowall et al. 1980). Concerns regarding autocorrelation which if not addressed may lead to incorrect smaller standard errors and larger test statistics are checked using three Portmanteau (Q) tests for white noise for each model using: 3 lags; 20 lags; and 5 lags. Bartlett's periodogram-based test for white noise is used as an additional check for autocorrelation. All tests reported throughout this study are two-tailed tests.

#### 3.3 STAGE THREE

Stage three is the qualitative component of the study, designed to identify how Vincentians understand that the two modes of service delivery – home visits and support centres – contributes to repeat requests for emergency relief. The qualitative data thus provides additional explanatory capability to augment and extend the findings of the first two stages'

<sup>&</sup>lt;sup>3</sup> Note that the lag terms which are all positive, with absolute values of marginal effects that when summed fall within the bounds of stationarity.

analyses. Stage three used semi-structured interviews with a sample of six Vincentians. These interviewees were purposively selected from the two relevant sites discussed in stage two. The criteria for selection were Vincentians who had 'lived experiences' (Wertz 2005) with both home visits and support centre visits within the two sites. A snowball method of collecting interviewees was used and in response to this the sampling criteria was expanded to include people who had also had experience volunteering at the support centre location due to their exposure to similar clients and observation of the process. Both the use of a non-probability sampling method and the sample size were determined by the limited number of volunteers with the specific relevant experiences of interest and their availability and desire to participate.

The identified Vincentians directly transacted the provision of charity, as opposed to the Society's management or conference office bearers *per se*. This is important as the premise is that the fundamental differences between the two modes is a 'lived experience' (Wertz 2005) and relationship and encounter between the Vincentian and the person seeking assistance. The Vincentians are the expert informants on what emergency relief was provided, how it was administered and why so. Following gatekeeper approvals Vincentians from the two conferences were invited to interview. Most interviews were conducted in the naturalistic setting of the support centre interview rooms, to diffuse power issues (Wasserfall 1997), and to evoke contextually relevant responses.

In all, one member of the St Benedict conference was interviewed. Three people were from St Francis conference and two Vincentians who primarily volunteered at their support centre. Those from the support centre shared their experiences with both the support centre and their observations of the work of St Francis conference work, as these are undertaken at the same site. The support centre is served by volunteers from multiple conferences.

#### 3.3.1 Stage three: Interview schedule

An interview schedule was designed to firstly understand the motives, Vincentian mission and self-appraisal of the value of the work of the participants, and then to elicit detailed accounts of how they experienced, transacted and evaluated the differences between the two service delivery models in their respective conferences.

A critical incident technique (Chell 1998) was embedded in the protocol to bring to life the participant accounts of their experiences. Interviews were conducted by three of the authorship team, on most occasions, and so manifest as conversations. Two of the interviewers have been embedded in the Society for over 18 months affording emic perspectives (Xia 2011).

#### 3.3.2 Stage three: Interview format

Interviewees were seen in a private room at the support centre, often directly prior to their time spent at volunteering at the support centre. Interviews took place in December, 2017 and were audio recorded and transcribed verbatim. The interviews were between 20-60 minutes in length. The transcripts were uploaded to QSR Nvivo a qualitative data-coding software package. The coding units collected descriptive data based on the research questions. Initial coding captured descriptive information regarding interviewees experiences of both the home visit and the support centre models. These codes revealed emerging patterns in person's responses regarding the two modes of delivery, the change from the home visit model to the support centre model, and the effect they felt this had on themselves and the people they assist. Other codes were captured on the basis of repetition or salience, including with respect to the people they assisted. These additional codes included 'shame' and 'gratitude'.

#### 3.3.3 Stage three: Service delivery characteristics

Despite operating from the same site, the work of the St Francis conference is distinct from the support centre and other conference activities. At St Francis conference people are seen three times a week for roughly two-hour blocks. At St Benedict's, people are seen two hours a week

in two separate one-hour blocks. People who contact the Society's Helpline seeking assistance are provided the specific days and times that they can receive assistance at these locations.

All interviewee's experiences with home visits were coded as 'home visitation' but 'support centre' references were limited to the scheduled appointment times held by St Francis and St Benedict's conferences at their respective support centres. Experiences at other conferences or at the support centres were coded independently. Those interviewees spoken with had typically been working as volunteers with the Society in some form for between 15 and 30 years, although one had only been a Vincentian for five years. The reasons for becoming involved were mostly faith-based and/or altruistic and often influenced through the experiences of a family member's involvement with the Society. Some also acknowledged the valuable skills they could gain through volunteering as well.

## 4 RESULTS

This section outlines the results of the analyses in the sequential order in which they were performed. Supplementary information is provided for readers interested in greater detail in terms of the data and procedures employed.

#### 4.1 STAGE ONE: RESULTS

Table 1 shows the Instrumental Variable Poisson model results. Most notably the results indicate that the IRR for the Hours per visit (support centre) variable is 0.51, statistically significant at the 5% level. This corresponds to a 49% reduction in the mean requests per person for a one hour increase in time Vincentians spend with a person, other things held constant. In comparison, the Hours per visit (home visits + support centre) and Hours per visit (home visits) variables are not statistically significant.

Table 1: Stage one Instrumental Variable Poisson model results

Mean requests per person				
Variable names	IRR			
Conference expenditure				
Furniture ('0000 (\$AUD))	0.98*			
Christmas hamper ('0000 (\$AUD))	1.00			
Bread run ('0000 (\$AUD))	0.98*			
Cash ('0000 (\$AUD))	0.99			
Food conference ('0000 (\$AUD))	1.00*			
Food other ('0000 (\$AUD))	1.01			
Other conf. exp. ('0000 (\$AUD))	1.01			
Vouchers ('0000 (\$AUD))	1.00			
Clothing (\$AUD)	1.00*			
Household (\$AUD)	1.00			
Accommodation				
Different addresses	1.25*			
Visits				
Hours per visit (support centre)	0.51*			
Hours per visit (home visits + support centre)	0.86			
Hours per visit (home visits)	0.95			
Local area measures				
Pop. density (persons/ha)	1.01*			
Unemployment rate (%)	1.00			
Spatial lag				
Spatially weighted lag mean requests per person	1.00			
Year fixed effects				
_2011	0.97			
_2012	0.97			
_2013	0.97			
2014	0.93*			
	0.95			
2016	0.95			
Summary statistics				
Observations	553			
Clusters	79			
Obs. per cluster	7			

Exponentiated coefficients (Incident rate ratios (IRR)); Standard errors adjusted for clustering of observations within conferences. p < 0.05

Note: The interpretation of the IRR can be explained through the use of an example. A one-unit increase in Hours per visit (support centre), on average, appears to lead to a 49% reduction in the mean number of requests per person.

#### 4.2 STAGE TWO: RESULTS

Table 2 columns 1 to 4, report the generalized linear models for mean requests per person over the last 30, 90, 180 and 360 days for St Francis conference. Table 2 column 1 indicates for the support centre variable an IRR of 0.93. That is, the change from the home visit model to the support centre model is associated with lower mean requests per person, specifically, a 7% lower level of mean requests per person in the short-run (in the month). This result is statistically significant at the 5% level. Table 2 column 1 charts the associated change in mean requests per person in the short-run, using these estimates the long-run or asymptotic change in mean requests per person distributed over time can be calculated.<sup>4</sup> For Table 2 column 1, the mean requests per person over the last 30 days is 7% lower in the short-run and 29% lower in the long-run, also statistically significant at the 5% level.<sup>5</sup> These results are presented in Figure 3. Note that the support centre variable is not statistically significant in Table 2 columns 2 to 4.

	(1) 30 days	(2) 90 days	(3) 180 days	(4) 360 days
Variable names	IRR	IRR	IRR	IRR
Support centre				
Support centre	0.93*	0.98	0.98	1.04
30 day lags				
L1.30 days	1.16*			
L10.30 days	1.09*			
90 day lags				
L1.90 days		1.16*		
L2.90 days		1.06*		
180 day lags				
L1.180 days			1.08*	
L2.180 days			1.06*	
L8.180 days			1.04*	
360 day lags				
L1.360 days				1.06*
L2.360 days				1.04*
Summary statistics				
Observations	109	117	111	117

Table 2: Stage two St Francis, generalized linear model results

Exponentiated coefficients (Incident rate ratios (IRR)); Robust standard errors are used.\* p < 0.05Note: Month fixed effects are omitted from output. L1.30 days refers to the first order lag.

<sup>&</sup>lt;sup>4</sup> The calculation is: 0.29 = (1-(0.93))/(((1.16)-1)+((1.09)-1))

<sup>&</sup>lt;sup>5</sup> Standard errors are calculated using the delta method.

These lag terms describe the pace of the transmission of the change over time. Shorter lower order lags with smaller positive IRRs indicate a quicker distribution of short-run changes over time. A large part of the total change in repeat requests is actually distributed over time.

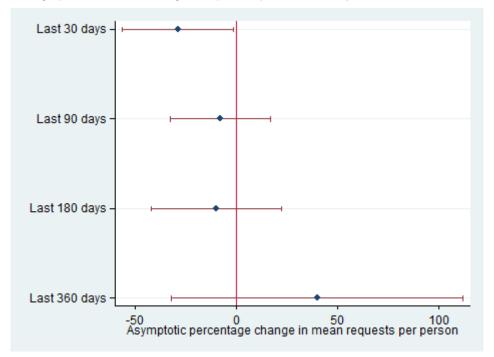


Figure 2: Stage two St Francis, long-run or asymptotic change

Table 3 columns 1 to 4, report the generalized linear models for mean requests per person over the last 30, 90, 180 and 360 days for St Benedict's. According to the results presented in Table 3 columns 1 to 4, the support centre variable is only statistically significant for mean requests per person over the last 90 and 360 days. Table 3 column 2 and Table 3 column 4 indicate that the change to the support centre model corresponds to a 13% and 15% reduction, in the short-run, in mean requests per person over the last 90 and 360 days. Table 3 column 360 days respectively. These estimates are statistically significant at the 5% level.

Variable names	(1) 30 days IRR	(2) 90 days IRR	(3) 180 days IRR	(4) 360 days IRR
Support centre				
Support centre	0.90	0.87*	0.95	0.85*
30 day lags				
L10.30 days	1.20*			
L18.30 days	1.11*			
L23.30 days	1.07*			
L31.30 days	1.15*			
L40.30 days	1.14*			
90 day lags				
L6.90 days		1.10*		
L17.90 days		1.10*		
L41.90 days		1.15*		
L44.90 days		1.09*		
180 day lags				
L6.180 days			1.08*	
360 day lags				
L9.360 days				1.05*
L10.360 days				1.08*
L31.360 days				1.06*
L49.360 days				1.06*
Summary statistics				
Observations	79	75	113	70

Table 3: Stage two St Benedict's, generalized linear model results

Exponentiated coefficients (Incident rate ratios (IRR)); Robust standard errors are used. \* p < 0.05Note: Month fixed effects are omitted from output. L01.30 days refers to the tenth order lag. Using these estimates the long-run or asymptotic change in mean requests per person distributed over time can be calculated. This calculation is presented in Figure 3 with 95% confidence intervals. A comparison of Table 3 and Figure 3 shows that even though the support centre variable is not statistically significant for mean requests per person over the last 30 days, the change corresponds to a 14% asymptotic change in the long-run, statistically significant at the 5% level. Figure 3 also shows that the calculation of the long-run or asymptotic change in mean requests per person yields an estimated 30% and 64% reduction, in the long-run, in mean requests per person over the last 90 and 360 days respectively. Both results are statistically significant at the 5% level. Similar to St Francis, a large part of the total change in repeat requests is distributed over time.

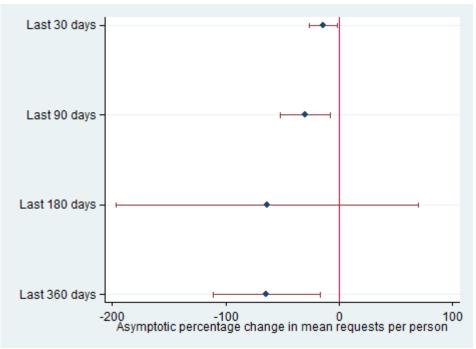


Figure 3: Stage two St Benedict's, long-run or asymptotic change

#### 4.3 STAGE THREE: RESULTS

The purpose of these interviews is to provide additional explanatory capability to augment and extend the findings of the first two stages' analyses. That is, these interviews will help to inform inferences drawn about what the two different service delivery models may mean for repeat requests for emergency relief. Specifically, the results in stages one and two provide some evidence to suggest that on average the support centre model corresponds to lower repeat requests for assistance. We reiterate, that we consistently interpret this as a positive finding. In order to better understand what might explain this result, interviews were undertaken with Vincentians at two Brisbane conferences that had transitioned from a home visit model to a support centre model. That is, St Francis conference, which changed from a home visit model to a support centre model at the beginning of October 2014 and St Benedict conference, which changed from a home visit model to a support centre model at the beginning of November 2014.

#### 4.3.1 Stage three: Rationale for model change

Interviewee's gave several reasons for their conferences changing from the home visit mode of service delivery to the support centre mode. According to the St Francis interviewee's the shift to the support centre model was largely driven by practical concerns and although the specific concerns mentioned varied the most common was the issue of inner-city parking. The interviewees reported no longer being able to park legally outside the homes of their clients and

felt that this significantly limited the amount and quality of time they were able to spend with them.

"It made it so hard, because we couldn't then park and go and visit. We used to have to get the people to come to us in the car. It just wasn't fair on them or us." (Interviewee F, St Francis)

St Francis interviewees also found that visiting people in boarding houses or emergencyaccommodation led to its own practical issues. First, they were not private enough to allow for an interview to be conducted with a person in need of assistance; "...there was no privacy at all." (Interviewee B, St Francis). Also, attending home visits at this type of accommodation could also lead to the Vincentian's being overwhelmed with requests for support from other residents.

"They used to go and visit in their home, and they'd going to a boarding house, and 'lo and behold', they'd go to see one person and they'd have all these people converge on them." (Interviewee E, support centre)

Other reasons for the change to seeing clients in a support centre environment given by members of both St Francis and St Benedict's, included the declining mobility of volunteers either due to age, health/fitness or limited access to a personal vehicle. Safety concerns were also raised. In some instances, this was linked to the increased perceived influence of drug use in their communities. These concerns are best summarised by Interviewee D from St Benedict's, who states that "...our average age is probably 60... We feel safe that way, sitting behind the desk in a hall rather than in the home environment." These practical issues highlight that, for these conferences, home visitation was failing to offer volunteers a safe and suitable environment to undertake their support work.

#### 4.3.2 Stage three: Reflections on support centre model efficacy

Interviewees expressed mixed opinions about which model best served the people they assist. The main benefit interviewees identified from seeing people at a support centre is that it represented an opportunity for the person to be more actively involved in the process. For example, at St Benedict's, it was felt that the change encouraged the people in need of assistance to be more proactive:

"[t]hey need to get out and come to us [rather] than just sitting at home waiting for somebody to turn up to hand out \$50 at the door. So if you really want help - and this must've been proved by the number of no-shows that we've had... So you wonder what their motive is. Are we too lazy? Because it was so easy to pick the phone up and call the helpline and have somebody turn up at your door." (Interviewee D, St Benedict's).

For another interviewee at St Francis it was not only about motivation but also about encouraging people to socialise and escape isolation,

"...because a lot of them have got mental issues and therefore isolate themselves. This way they're sort of being brought out, if you know what I mean, and they're enjoying it. When they come in they're happy to see you. So that's a good thing, I think, as opposed to just going to the home. Because sometimes they just come to the door, grab what you had for them, and shut the door. To me, that was unhealthy for them. I think [the support centre is] healthier for them."

#### 4.3.3 Stage three: Reflections on home visit model efficacy

In contrast, some interviewees felt that the home visits were preferable despite their limitations. This was partly because of the benefit to the people being assisted. For one interviewee, this included a feeling that people were more likely to share difficult or upsetting information in the comfort of their home (Interviewee B, St Francis) or that being seen waiting outside a support centre might be in some sense demeaning (Interviewee C, support centre). One clear benefit to

home visitation noted by several interviewees (Interviewee's A, D & E) was the exposure to how the people they were assisting lived, with one interviewee stating that,

"[f]rom our point of it, I suppose, is seeing... why they would ask for assistance, the state of their houses. As I say, there's not too many private rentals, mainly government rentals, and you could see, when you did get inside, the state of the house or the yard or even the people inside. It shows, look, you do need help..." (Interviewee D, St Benedict's)

It is notable that regardless of whether the participant was assisted via home visitation or the support centre, the reasoning would be couched in terms of how the client demonstrated that they were in need of the services provided.

#### 4.3.4 Stage three: Contrasting experiences between service delivery models

For home visitation, a person's needs seem self-evident, manifesting itself in the environment, whereas for a support centre, whether or not one presents for assistance reveals a genuine need. For this reason, a change in service delivery model may also change how a person's need is assessed.

In this regard, some interviewees did comment on the way people appeared at the support centre, stating that while there was a desire to assist people who are well-presented these are not typically the people they see (Interviewee's A & B). Conversely, another interviewee commented that "...some come here immaculate and you wonder why on earth they've got to come?" (Interviewee E, support centre)

Apart from physical proximal indicators of need, people seeking assistance from the support centres would also often rely on demonstrating need through sharing stories about their situations. These stories were met with a degree of scepticism on the whole, with interviewees sharing their experiences with an unlikely number of 'lost wallet' claims (Interviewee's A, D, E) and a feeling that their age or 'grey hair' might somehow imply naiveté rather than wisdom (Interviewee's B, E).

However, despite the scepticism, interviewees also felt strongly that their role was to listen and provide support for people regardless of the integrity of their claims.

"...they tell you some story and you can see that they're making it up, but you don't challenge it. You're there and if you say that you spent it on medicine, then you spent it on medicine. But at the least you've got to ask them." (Interviewee D, St Benedict's)

"I think part of that is that you don't really want to refuse people, basically. So if people put their hand up you've got to have a pretty good argument to refuse them outright. So conferences, I think, tend to comply with their request." (Interviewee C, support centre)

"There might be a good reason for them to come, and just as we can't tell whether the people would come once every six weeks, or roughly we see them like that, we can't tell whether they're really in need. You've got to take what they say." (Interviewee A, St Francis)

These comments suggest that for support centre models, people in need of assistance feel the need to prove their deserving nature, through their presentation, engagement and efforts to elicit empathy from frontline workers (Agllias et al. 2016).

In this regard, people delivering and seeking assistance are similarly attuned to what characterises worthy acts of charitable service delivery (e.g. becoming a 'good' neoliberal citizen) (Woolford and Nelund 2013). However, the comments also pointed to a largely overriding, perhaps religious (Camilleri and Winkworth 2005, Ayton et al. 2012), commitment to provide assistance that transcends whether or not a charity provider believes the stories offered by people seeking assistance.

## 4.3.5 Stage three: The opportunity to spend time and provide a high standard of practice

For both models of service delivery, the time spent with people tends to be relatively short, between approximately five and ten minutes on average (see supplementary information). However, interviewees neither explicitly supported nor repudiated the idea that the time spent at the support centre, compared to a home visit, was more effective at reducing repeat requests for support. The amount of time spent with a person instead seemed to be heavily reliant on personal preference and particular situation. For St Francis and St Benedict's, the practical impediments to providing people support meant that the support centre appeared to be the best way to ensure that volunteers were able to take the time to speak with the people they are helping.

#### 4.3.6 Stage three: Indefinite crisis support and an uncomfortable tension

Intertwined with the interviewees' sincere desire to help the poor is the belief, among interviewees, that the assistance is only intended to provide short-term relief in crisis. Interviewees though, reported this to be at odds with what they tended to increasingly observe, that is, a general shift to a more ongoing, or even perpetual reliance on emergency relief, as one interviewee states:

"...there are more and more clients that have got a long history with the Society, who are what we call 'regulars', who we see on a monthly basis. But when I first joined, the feeling was that it was emergency relief. It was going to be short-term, so, in my view, that's still the case." (Interviewee C, support centre)

These persistent requests were often interpreted as reflecting a sense of entitlement on the part of the person requesting assistance.

"We sort of tell them, 'This is a hand up, not a handout. Don't front up every month for a handout. You've got to do the right thing' ". (Interviewee D, St Benedict's)

"[W]e try to explain to them in the best way possible that because we have to rely on people's generosity [donors], they can't be coming to us every week or every fortnight." (Interviewee B, St Francis)

The interviewees' perception of entitlement among some of those seeking assistance also seems to stem from an awareness of, or perception that, there is limited support available. Further, it also seems to reflect an acknowledgement that the material assistance should be distributed in a fair and maintainable way, in lieu of rules-based approaches used elsewhere. For instance:

"You've got to have the funding behind you to be able to do that, and the other thing is that you've got to look at what demand it will create if you do it. That's one of the big issues with, and with, all those people living in that area. If you do rent for one..." (Interviewee C, support centre)

"[B]ecause our funds are limited we have a base amount that we normally give them to make sure they don't starve, and that's \$40 worth of food. Now, years ago, going back about six, seven, eight years ago we used to give them about \$50. Then we had more people coming into the area, more people we had to see. The funds weren't increasing so we cut it down to \$40." (Interviewee A, St Francis)

Independent of the interviewees' admirable intentions, the tension between scarce resources for distribution and an increasingly seemingly entitled people in need of assistance, arguably a product of deteriorating macro-structural conditions (Warr, Davern, Mann & Gunn 2017), create an environment where the worthiness of a person's request for assistance may be more readily questioned.

#### 4.3.7 A gendered experience of emergency relief delivery

One pattern that began to emerge from the qualitative analysis, although it is not fully developed here, were the different attitudes towards single men as opposed to women with children. Women with children were often perceived as those in greatest need that would receive the greatest levels of support.

"If a woman comes in with children and you could give them lots of food and perhaps accommodation, if we can, and we do do that if we see the need for it. So we do do some accommodation, but not as a general rule. You take every case individually." (Interviewee E, support centre).

"If there are children involved, we usually increase it for that reason. Now, there are limits. I think \$100 or \$120 is the maximum that I can remember in recent times handing out to anyone. That's a rarity. We don't do it often." (Interviewee A, St Francis)

This is intuitively unsurprising. However, people seen at support centres were often referred to as male, one respondent claiming that,

"[t]hey're mainly all single. We had a single dad in [one place] with a couple of children, and then there's a mother with a child. But most of them are –

- Q: Singles, yeah.
- A: Most of them are singles.
- Q: And a high proportion of men?
- A: A very high proportion of men." (Interviewee B, St Francis)

Indeed, in 2016, for St Francis, 70% of people requesting help are identified as male. Conversely, women and children were most likely to be mentioned when discussing home visits.

Given that gender plays a role in how deservedness is assessed and single men are more likely to be able to attend a support centre, this may amplify the pressure felt by people seeking help to prove the merit of their request. Moreover, women, through 'shame', the practicalities of having to care for children on an 'outing' to a support centre, or a combination of both, may prefer home visits. These dynamics may have a multitude of unintended consequences.

#### 4.3.8 Stage three: The results in summary

For St Francis and St Benedict's, the change to the support centre model has meant that due to practical barriers (e.g. limited parking, a lack of private space to speak with people receiving assistance and concerns for personal safety) people are able to receive support that they may not have otherwise received. This reflects the sensitivity of local providers to the characteristics of the communities that they work within (Access Economics 2008). The interviewees were largely equivocal about which model of service delivery offered superior outcomes for the people they helped. Although, some interviewees felt that despite the limitations of home visits that they were the preferable model of service delivery. There was however, a clear narrative that privileged the needs and convenience of the charity provider, both in terms of being able to transact charity and of being effectively positioned to adjudge recipient worthiness (Woolford & Nelund 2013).

On the whole, the data suggest that the support centre model: may encourage people to be more self-directed; may provide an opportunity for people to socialise and escape isolation; and may even provide a more conducive environment, depending on the circumstances, to spend time and speak to those people providing assistance. In contrast, the interviews suggest that the support centre model: may also be in some sense demeaning for those that it assists, with people waiting outside the support centre to receive assistance.

A subtle, yet significant, undercurrent throughout these interviews was that the support centres, compared to the home visits, seemed to accentuate the potential for deservedness to colour the interaction been volunteers and the person seeking assistance. However, several interviewees explicitly rejected this. Noting that while they often doubted the validity of the stories offered by those seeking assistance, the help was generally still provided. One even states explicitly that "...the ancient Victorian concept of the deserving poor have nothing to do with us. Nothing whatsoever" (Interviewee A, St Francis). Still, the necessary conditions, in particular, the perception that some of those seeking assistance seem entitled (i.e. making repeat requests for what is intended to be emergency relief, arguably a product of deteriorating structural conditions (Warr et al. 2017), and the likely greater pressure felt by people to demonstrate that they are in need where their environment cannot speak for them, may lead to fewer repeat requests under a support centre model. Nonetheless, whether or not this corresponds to an improvement in outcomes, is not clear.

## 5 DISCUSSION

This study investigates what emergency relief service delivery modes may mean for the people they are intended to assist through the lens of repeat requests for assistance. This is achieved through the use of a mixed methods approach, specifically, a sequential explanatory design. Using this design, quantitative analysis is followed by qualitative analysis to provide additional explanatory capability to augment and extend the findings of the first two stages' analyses. These interviews help to inform inferences drawn from what the two different service delivery models may mean for repeat requests for emergency relief (cf. Daugherty and Barber 2001).

The quantitative evidence presented in this study indicates that throughout the State of Queensland, the largest State/Territory in Australia by number of emergency relief requests for assistance (according to DSS DEX data), the time spent at *support centres*, while relatively brief, corresponds to markedly lower mean repeat requests. That is, a 49% reduction in the mean requests per person for a one hour increase in time Vincentians spend with a person, other things held constant. In comparison, the Hours per visit (home visits + support centre) and Hours per visit (home visits) variables are not found to be statistically significant.

Similarly, an in-depth investigation into two conferences which had changed from a home visit model of service delivery to a support centre model, provided some additional evidence which corroborates this general finding that the support centre model corresponds to lower repeat requests for assistance. It also indicates that the change is dynamic in nature, with only a small portion of the change occurring in the short-run. In particular, it shows the support centre model corresponds to an estimated 14% to 29% fewer mean requests per person over the last 30 days, in the long-run, statistically significant at the 5% level. Further, the results also show an estimated 30% and 64% reduction, in the long-run, in mean requests per person over the last 90 and 360 days respectively, statistically significant at the 5% level. Prima facie, these results paint a promising picture in one regard, as earlier assessments have (cf. Winter and Cree 2016), that repeat requests are evidence of a continued dire need and not making (or making fewer) repeat requests; an absence (or lessening) of that need.

However, the qualitative evidence presented in this study, suggests a more nuanced interpretation of the results may be warranted. Specifically, the results suggest the support centre model, compared to the home visit model, potentially, encourages people to be more self-directed; providing an opportunity for people to socialise and escape isolation; and even provide a more conducive environment, depending on the circumstances, to spend time and speak to those people providing assistance. Indeed, some people in need might even feel the home visit is intrusive (Australian Council of Social Service Inc. 2011). However, the support centre model, compared to the home visit model, may also be in some sense demeaning for those that it assists, with people waiting outside the support centre to receive assistance. Further, the support model may plausibly exacerbate pressure felt by people to provide evidence of their need. It is reasonable to expect that this may detract from how a person in need experiences an interaction at a support centre. This may have the consequence of deterring frivolous requests for assistance but it may also impede the ability of support centres to offer more than 'band-aid' fixes.

In all, the support centre model may provide a more practical solution, depending on the context (e.g. limited parking, a lack of private space to speak with people receiving assistance and concerns for personal safety), and hence improve the quality of the service provided. However, it may also heighten the focus on the merit of a person's claim to need assistance, and perversely, this may mean that their underlying needs are less likely to be aired and subsequently met and ultimately, make it more difficult for a person to overcome the need to make repeated requests emergency relief assistance.

#### 5.1 CONTRIBUTION TO THE LITERATURE, PRACTICE AND POLICY

This study presents a thorough examination of what emergency relief service delivery modes may mean for the people they are intended to assist, adding to the stock of knowledge and helping to illuminate some of the mechanisms through which the service delivery model may help and hinder the plight of people requesting assistance. This study also offers insights for practice and policy. Emergency relief provision in Australia is shared between the government and the not-for-profit sector (Mendes 2009). In a practical sense, the findings of this study suggest that as much as possible, assessments of a person's deservingness should be avoided. For the volunteers, this means continuing to provide assistance, even when there is doubt about the integrity of any story offered. Further, given the doubts expressed about stories offered, there seems to be little value in expecting a person to provide a story or providing an opportunity for a story to be imparted. Instead, the opportunity to share one's story may be more usefully shared with other support services that may help to address deeper problems.

Other practical measures include separating front-line volunteers from budgetary concerns; and where cynical views about a person's deservingness are expressed disputing or challenging these views. Furthermore, the gendered experiences of people seeking emergency relief needs addressing, particularly where the practicalities of visiting a support centre might present significant barriers for women with children.

The findings of this study are directly relevant to the practices 297 providers of emergency relief throughout Australia, formalised in The Emergency Relief Handbook (2011), and funded at least in part by federal government funding under the Financial Wellbeing and Capability Activity. Not to mention, the direct payments provided by the Australian Government including for example, Urgent Payments and Crisis Payments. This evidence is also relevant for New Zealand public policy, for instance, the country's Special Needs Grant, which requires people requesting help to prove hardship, with the burden of proof escalating as the number of requests increases (Ministry of Social Development 2018) and a similar approach has been circulated in Australia (Department of Social Services 2017). These findings are also quite relevant to the practice of food relief and emergency relief delivery throughout the world, where decisions regarding service delivery have not tended to be based on evidence of what works best for people living in poverty (Kahn 1976).

#### 5.2 LIMITATIONS

Not unlike our earlier report, this study is not without its own limitations. For the quantitative analyses a few points should be acknowledged: (1) conference-level statistical analysis may not necessarily correspond to individual-level inferences; (2) also despite the efforts made and steps taken to mitigate the risk of some unobserved confounding factor, as with all studies using observational data, this is difficult to unequivocally dismiss; (3) further, while repeated requests allows for an individual to be followed over time, once that person no longer requires assistance, it is difficult to say conclusively what that person's outcomes are.

For the qualitative analysis, some caveats similarly apply. First, in spite of obtaining interviews with close to the population of volunteers at a few conferences, the sample still only yielded six interviews. Second, these interviews were targeted at volunteers rather than recipients with experience of the change from the home visit model to the support centre model. Yet, whilst not unimpeachable, the conclusions drawn endure despite these limitations. Naturally though, numerous opportunities for further research remain.

#### 5.3 OPPORTUNITIES FOR FUTURE RESEARCH

#### 5.3.1 On the interplay between volunteers and the poor

In this instance, despite the interviewees' citing that they continue to provide assistance even when there is doubt about a story that is offered, the environment of the support centre model may inadvertently, compared to a home visit model, lend itself to people feeling the need to evidence the merit of their request. Additional investigation would be useful to gather more evidence to further develop our understanding of how the interaction between volunteers and the people they assist transpires and is experienced. In particular, to elaborate on how the concept of the (un)deserving poor may or may not ultimately manifest itself in interactions with the poor; what this may or may not mean for a person's outcomes; and what remedial action might be necessary.

#### 5.3.2 Emergency relief service delivery models as a gateway

The need for emergency relief has been described as stemming from: "A combination of high costs of living and inadequate income create the demand for ER, coupled with a lack of resources to create a financial buffer against hard times. People without resources such as savings or an ability to seek assistance from friends or relatives, are particularly vulnerable to increases in the cost of living and can find it especially difficult to cope in a crisis situation. As household resources are depleted, essential goods such as food and medicine are sacrificed, in order to keep the rent paid and electricity, gas, and water connected. The end result is deprivation" (Engels, Nissim, and Landvogt 2012, 70).

Many have lamented the nature, and ability, of emergency relief to achieve much more than ensuring a person is fed for a given day (Wang and Lyu 2013, Engels, Nissim, and Landvogt 2012). This is an unfortunate position to resign to. Further, it contrasts starkly with what ambitions for people to achieve a life of dignity, defined as being able to access appropriate food, clothing and healthcare; safe and secure housing; meaningful work, education, rest and enjoyment; and the opportunity to participate in and contribute to communities which major church providers espouse as the ethos of the sector (Anglicare Australia et al. 2009). These ambitions point to people receiving material assistance requiring much more integration with complementary services through referral pathways and case management support. An elementary prerequisite of assessing service integration is to first establish the effectiveness of isolated services. Service integration is proposed to lead to synergies through, while not often described in these terms, economies of scale and scope, reducing the costs of service provision and concomitantly improving a person's outcomes. Nonetheless, the evidence for this is wanting (Organisation for Economic Co-operation and Development 2015).

#### 5.3.3 The form and substance of emergency relief delivery

It may be argued that the process and substantive assistance provided matters more than the mode. It is likely that both matter. Instinctively, larger interventions are more likely to realise improvements in a person's life outcomes. Relatedly, it is reasonable to expect given the complexity of poverty that there is a myriad of factors that moderate and mediate the efficacy of service delivery.

#### 5.4 CONCLUDING COMMENTS

On the face of it, these (quantitative) results suggest that support centre models achieves advantages over the home visit model, corresponding to fewer repeat requests for emergency relief. While repeat requests may indicate a continued dire need it is difficult to know for sure that not making (or making fewer) repeat requests represents an absence (or lessening) of that need. Instead, the findings presented in this study point to: (1) some context-specific situational reasons why for some support centres this may actually be the case (e.g. limited parking, a lack of private space to speak with people receiving assistance and concerns for personal safety); and (2) some deeper and more complex reasons for why the reverse may be true, that is, the implied pressure one may feel to demonstrate the worthiness of their request for help. It follows that in light of this, adaptive management of service delivery models would involve considering measures which mitigate the potential for the "…ancient Victorian concept of the deserving poor…" (Interviewee A, St Francis) to unwittingly pervade interactions with the people service providers aim to help. For service providers, this is a case of strengthening an already longstanding moral commitment to help those in need.

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## SUPPLEMENTARY INFORMATION

#### **STAGE ONE**

#### Stage one – Data

Stage one draws on administrative data recorded by the St Vincent de Paul Society Queensland through their Support OnLine (SOL) customer relationship management system. This database contains information regarding interactions and assistance provided by the Society. The 2nd of October 2006 was the inception of the database. The variables used throughout this study are extracted from this database at the conference-level. The Society's conferences, comprised of conference members, may or may not be associated with a church or churches providing support to a particular geographic area. At the time of writing 202 conferences were active; organised within regional councils, within diocesan central councils, regional councils and the State council. In all, a balanced panel of 79 conferences for the years 2010 to 2016 (a total of 553 observations) is used for the regression analysis. A balanced panel was required because 'spwmatrix', which was used to generate an inverse distance weighted (where  $\alpha = 1$ ) spatial weights matrix so that we may abstract from spatially omitted variables, only accommodates a balanced panel. Finally, spatial autocorrelation was investigated and the spatial lag of the repeat requests derived using 'splagvar'.

#### Stage one – The key variables

Requests are generally received initially through the Helpline and are typically made for food, finance, furniture and/or clothing. Each of these requests may be attributable one or more individuals; for example, an individual, a couple or a family. Conference members respond to these requests. In some cases these requests can generate many visits to those in need in order to provide assistance. Some examples of the types of assistance provided include; food, food vouchers, clothing, a small loan for a refrigerator or the payment of unexpected expense such a medical bills. A number of other services and programs are also offered by the Society and individuals may be referred to these where appropriate or other external government or community organizations. The dependent variable is the mean number of requests per person for a conference for a year.

Several key groups of independent variables are included in the regression analysis; conference expenditure; conference type-specific payment expenditure; accommodation and visits. The descriptive statistics for these variables are presented in Table 1.

#### Table 2: Descriptive statistics

ean requests per person by conference and year tal furniture expenditure ('0000 (\$AUD)) by conference by year tal Christmas hamper expenditure ('0000 (\$AUD)) by nference by year tal bread run expenditure ('0000 (\$AUD)) by conference by	553 553 553	12.01 2.78	6.75 4.68	4.43 0	62.61 25.92
tal furniture expenditure ('0000 (\$AUD)) by conference by year tal Christmas hamper expenditure ('0000 (\$AUD)) by nference by year tal bread run expenditure ('0000 (\$AUD)) by conference by	553	2.78			
tal Christmas hamper expenditure ('0000 (\$AUD)) by nference by year tal bread run expenditure ('0000 (\$AUD)) by conference by			4.68	0	25.02
tal Christmas hamper expenditure ('0000 (\$AUD)) by nference by year tal bread run expenditure ('0000 (\$AUD)) by conference by			4.68	0	25 02
nference by year tal bread run expenditure ('0000 (\$AUD)) by conference by	553				23.92
tal bread run expenditure ('0000 (\$AUD)) by conference by		1.66	4.64	0	42.24
				· ·	
ar	553	0.55	2.26	0	23.23
				Ō	9.17
ught by the conference by conference by year	553	3.75	8.97	0	57.79
tal food other expenditure ('0000 (\$AUD)). This is donated food					
conference by year	553	1.03	2.52	0	18.93
tal other conference expenditure ('0000 (\$AUD)) by conference					
year	553	0.77	1.83	0	12.45
tal vouchers expenditure ('0000 (\$AUD)). This includes for					
ample, food vouchers, phone vouchers and other vouchers					
most 90% of these vouchers are for food) by conference by					
ar	553	11.28	12.94	0	70.83
tal clothing expenditure (\$AUD) by conference by year		3835.96	6656.66	0	45316.3
tal household expenditure (\$AUD) by conference by year	553	1671.38	3374.67	0	20239.9
nference and year	553	2.36	1.11	1	13.23
				0	0.04
	553	0.08	0.14	0	0.64
		0.00	0.44	0	0.00
	553	0.03	0.11	U	0.82
	552	0.10	0.10	0	1.16
configuence and year	553	0.19	0.19	U	1.10
	r al cash expenditure ('0000 (\$AUD)) by conference by year al food conference expenditure ('0000 (\$AUD)). This is food ight by the conference by conference by year al food other expenditure ('0000 (\$AUD)). This is donated food conference by year al other conference expenditure ('0000 (\$AUD)) by conference year al vouchers expenditure ('0000 (\$AUD)). This includes for imple, food vouchers, phone vouchers and other vouchers nost 90% of these vouchers are for food) by conference by r al clothing expenditure (\$AUD) by conference by year	r 553 al cash expenditure ('0000 (\$AUD)) by conference by year al food conference expenditure ('0000 (\$AUD)). This is food ight by the conference by conference by year al food other expenditure ('0000 (\$AUD)). This is donated food conference by year al other conference expenditure ('0000 (\$AUD)) by conference year 553 al vouchers expenditure ('0000 (\$AUD)). This includes for imple, food vouchers, phone vouchers and other vouchers nost 90% of these vouchers are for food) by conference by r 553 al clothing expenditure (\$AUD) by conference by year 553 al household expenditure (\$AUD) by conference by year 553 an total number of different addresses of individuals by ference and year 553 an number of hours per visit for support centre model ference by conference and year 553 an number of hours per visit for home visit + support centre del conference by conference and year 553 an number of hours per visit for home visit + support centre del conference by conference and year 553	r5530.55al cash expenditure ('0000 (\$AUD)) by conference by year5530.38al food conference expenditure ('0000 (\$AUD)). This is food5533.75al food other expenditure ('0000 (\$AUD)). This is donated food5531.03al other conference by year5531.03al other conference expenditure ('0000 (\$AUD)) by conference5530.77al ouchers expenditure ('0000 (\$AUD)). This includes for5530.77al vouchers expenditure ('0000 (\$AUD)). This includes for5531.128mple, food vouchers, phone vouchers and other vouchers55311.28al clothing expenditure (\$AUD) by conference by year5533835.96al household expenditure (\$AUD) by conference by year5531671.38an total number of different addresses of individuals by5532.36an number of hours per visit for support centre model5530.08ference by conference and year5530.03an number of hours per visit for home visit + support centre5530.03an number of hours per visit for home visit + support centre5530.03	r5530.552.26al cash expenditure ('0000 (\$AUD)) by conference by year5530.381.15al food conference expenditure ('0000 (\$AUD)). This is food5533.758.97al food other expenditure ('0000 (\$AUD)). This is donated food5531.032.52al other conference by year5530.771.83al ouchers expenditure ('0000 (\$AUD)). This includes for5530.771.83al vouchers expenditure ('0000 (\$AUD)). This includes for55311.2812.94al vouchers expenditure (\$0000 (\$AUD)). This includes for55311.2812.94al vouchers expenditure (\$0000 (\$AUD)). This includes for55311.2812.94al clothing expenditure (\$AUD) by conference by year5533835.966656.66al household expenditure (\$AUD) by conference by year5531671.383374.67an total number of different addresses of individuals by ference and year5530.080.14an number of hours per visit for support centre del conference by conference and year5530.030.11an number of hours per visit for home visit + support centre del conference by conference and year5530.030.11	r5530.552.260al cash expenditure ('0000 (\$AUD)) by conference by year al food conference expenditure ('0000 (\$AUD)). This is food ight by the conference by conference by year al food other expenditure ('0000 (\$AUD)). This is donated food conference by year5533.758.970al cod other expenditure ('0000 (\$AUD)). This is donated food conference by year5531.032.520al other conference expenditure ('0000 (\$AUD)). This includes for war5530.771.830al ouchers expenditure ('0000 (\$AUD)). This includes for imple, food vouchers, phone vouchers and other vouchers nost 90% of these vouchers are for food) by conference by r al clothing expenditure (\$AUD) by conference by year55311.2812.940al ousehold expenditure (\$AUD) by conference by year5533835.966656.660al household expenditure (\$AUD) by conference by year5531.671.383374.670an number of different addresses of individuals by ference and year5530.080.140an number of hours per visit for support centre model ference by conference and year5530.030.110an number of hours per visit for home visit + support centre del conference by conference and year5530.030.110

Pop. density (persons/ha) <sup>*</sup>	Number of persons per hectare in Statistical Local Area 2 (SA2)					
	of the conference by conference and year	553	15.54	12.37	0.01	65.35
$l l n = m = l \circ (m = n + r = r = (0/)^*$	Unemployment rate of the Statistical Local Area 2 (SA2) of the					
Onemployment rate (78)	conference by conference and year	553	6.97	3.59	1.30	23.6
Unemployment rate (%)* Unemployment rate of the Statistical Local Area 2 (SA2) of the						

\*Note that the underlying data for the pop. density (person/ha) measure is prepared by the Australian Bureau of Statistics (ABS) and obtained from. This source provides resident population estimates for the years between 2001 and 2015 at the Statistical Local Area (SA2) level from 2001 to 2015. At the time of writing the population figures for 2016 at the SA2 level were available and have been obtained from linearly extrapolation resident population estimates for the years 2001 to 2015. Note also, that the small area estimates of the unemployment rate at the SA2 level are obtained from the for the years ending September 2012 to September 2016. Using census data from time series profiles from the ABS at the SA2 level, the years between the 2006 and 2011 Census were linearly interpolated.

#### Stage one - Estimation technique

This stage employs a Poisson quasi-maximum likelihood estimator (QMLE) with continuous endogenous covariates estimated using the generalized method of moments (GMM) estimator. This method is also known as an exponential conditional mean model in which some of the covariates are endogenous. The Poisson model is particularly well suited to nonnegative dependent variables that are count variables, which take nonnegative integers, including zero. Furthermore, it has robustness properties, yielding consistent and asymptotically normal parameter estimates. That is, whether or not the variance equals mean (e.g. the distribution is over- or under-dispersed), provided the standard errors are adjusted (Windmeijer and Silva 1997). For the dependent variables of interest the distributions are not normally distributed (see Figure 1). Skewness and kurtosis test for normality rejects the null hypothesis of normality.

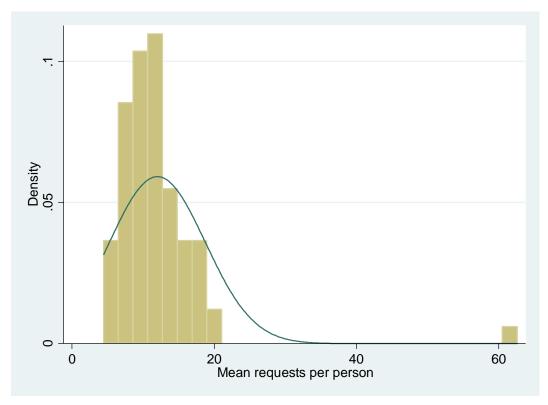


Figure 1: Stage one – distribution of conference-year mean requests per person compared to their respective normal distributions throughout Queensland, Australia (2007 – 2016)

It is implemented using the Stata command 'ivpoisson' in Stata/MP 14.2 (Wooldridge 2009). Throughout this study the regression errors are treated as multiplicative; the GMM estimator is used; the initial weight matrix is unadjusted and the GMM weight matrix accounts for arbitrary correlation among observations within conferences; the standard errors are adjusted for clustering within conferences; and Incident Rate Ratios (IRR) are reported throughout. All tests reported throughout this study are two-tailed tests. Full model results are reported in Table 2.

	Mean requests per person						
	IRR <sup>*</sup>	IRR 95% CI	Std. Error	<i>p</i> -value	VIF		
Conference expenditure							
Furniture ('0000 (\$AUD))	0.98*	(0.97,0.99)	0.01	0.00	6.56		
Christmas hamper ('0000	1.00	(1.00,1.01)	0.00	0.23	2.40		
(\$AUD))							
Bread run ('0000 (\$AUD))	0.98*	(0.96,1.00)	0.01	0.03	2.45		
Cash ('0000 (\$AUD))	0.99	(0.98,1.01)	0.01	0.56	1.24		
Food conference ('0000 (\$AUD))	1.00*	(0.99,1.00)	0.00	0.04	2.62		
Food other ('0000 (\$AUD))	1.01	(0.99,1.04)	0.01	0.17	4.75		
(\$AUD)) (\$AUD))	1.01	(0.99,1.03)	0.01	0.30	3.03		
	1.00	(1 00 1 01)	0.00	0.10	3.62		
Vouchers ('0000 (\$AUD))	1.00 1.00*	(1.00,1.01)	0.00 0.00	0.18 0.01	3.02 5.88		
Clothing (\$AUD)		(1.00,1.00)					
Household (\$AUD)	1.00	(1.00,1.00)	0.00	0.05	2.95		
Accommodation	1.05*	(1 01 1 00)	0.00	0.00	F 41		
Different addresses /isits	1.25*	(1.21,1.30)	0.02	0.00	5.41		
Hours per visit (support centre)	0.51*	(0.30,0.86)	0.14	0.01	2.44		
Hours per visit (home visits + support centre)	0.86	(0.73,1.01)	0.07	0.06	1.67		
Hours per visit (home visits)	0.95	(0.72,1.23)	0.13	0.68	3.48		
ocal area measures							
	1.01 <sup>*</sup>	(1.00,1.01)	0.00	0.00	3.29		
Pop. density (persons/ha)	1.00		0.00	0.00	5.34		
Unemployment rate (%)	1.00	(0.99,1.01)	0.00	0.71	0.34		
Spatial lag Spatially weighted lag	1.00	(1.00,1.00)	0.00	0.51	2.90		
	1.00	(1.00, 1.00)	0.00	0.51	2.90		
mean requests per person <i>cear fixed effects</i>							
_2011	0.97	(0.01.1.02)	0.03	0.29			
		(0.91,1.03)					
_2012	0.97	(0.90,1.03)	0.03	0.29			
_2013	0.93*	(0.86,1.00)	0.03	0.30			
_2014	0.95	(0.88,1.02)	0.03	0.04			
_2015	0.95	(0.88,1.01)	0.03	0.14			
_2016	0.97	(0.92,1.03)	0.03	0.11			
Summary statistics	FEO						
Observations	553						
Clusters	79						
)bs. per cluster	7		define and the second				
nstrumented	Hours per visit (support o	entre),Hours per visit (home v Hours per visit (home visits)	visits + support centre) and				
nstruments		port centre), L1.Hours per vis visit (home visits), L2.Hours p					
	L2.Hours per visit (home visits + support centre), L2.Hours per visit (home visits),						
	L3.Hours per visit (support centre), L3.Hours per visit (home visits + support						
	centre), L3.Hours per visit (home visits), Furniture ('0000 (\$AUD)), Christmas						
	hamper ('0000 (\$AUD)), Bread run ('0000 (\$AUD)), Cash ('0000 (\$AUD)), Food						
		D)), Food other ('0000 (\$AUD)					
		0000 (\$AUD)), Clothing (\$AUD)					
		Pop. density (persons/ha), Ur					
		ean requests per person, _20					
	Spanany weighted ag II	_2015 and _2016	2012, _2013, _2014,				

Exponentiated coefficients (Incident rate ratios (IRR)); Standard errors adjusted for clustering of observations within conferences; 95% confidence intervals in parentheses; Variance inflation factors (VIFs), \* p < 0.05. Note: To aid in the interpretation of the instrumental variables reported in Table 2 it should be noted that 'L1' in L1.Hours per visit (support centre) refers to the first order temporal lag. \* The interpretation of the IRR can be explained through the use of an example. A one-unit increase in Hours per visit (support centre), on average, appears to lead to a 49% reduction in the mean number of requests per person. <sup>†</sup> VIFs were obtained post-

estimation using the ivreg2 command. VIFs do not appear for the year fixed effects as these variables are partialled out of the regression.

#### Stage one – Identification

There are many potential sources of endogeneity which threaten to confound the identification and approximation of causal impacts of the assistance provided by the Society on the degree of dependence on the Society's services. The potential for some unobserved factor (e.g. an individual's interaction with complementary or substitute local community services.) to example apparent associations is serious and could lead to incorrect inferences. This risk is mitigated by the inclusion of a spatial lag. Figure 2 below shows the presence of spatial autocorrelation.

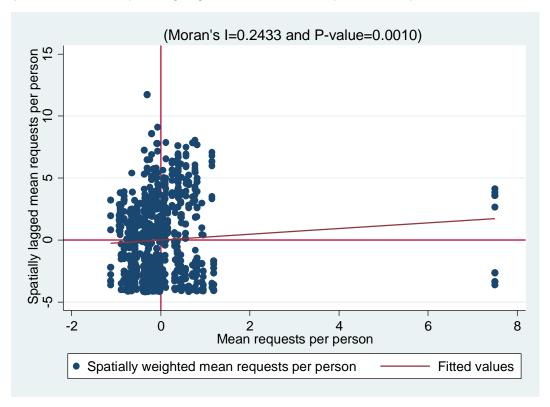


Figure 2: Stage one – Moran's I for mean requests per person throughout Queensland, Australia (2007-2016)

Simultaneity bias represents an issue by construction for spatial lags. This is because one conference may be influenced by and may influence a neighbor conference. For this reason, it is difficult to meaningfully interpret the coefficient for this variable. This variable is included in the model to abstract from potentially confounding omitted spatial variables.

To address the issue of simultaneity as it relates to the service delivery mode-specific hours per visit variables, an instrumental variable approach is taken to the analysis. Specifically, the variable hours per visit variables, one specific to each mode of service delivery, is instrumented using the first, second and third order temporal lags of the variable. The diagnostic test statistics are reported in the supplementary information. Importantly, the instrumental variables pass the required tests. There is no evidence to indicate that the instruments are themselves endogenous (that is, the instrumental variables satisfy the exclusion restriction criterion) nor that they are weakly identified. Beyond these diagnostic tests (see Table 3) which lend confidence to the instrumental variables, the temporal ordering of events severs the simultaneity that would otherwise plague the results as the present cannot predict the past.

In addition, it is worth noting that the variance inflation factors (VIFs) provide no indication of potential multicollinearity at the conventional level of 10. As maintained elsewhere (O'Brien 2007), there has been a general overreliance on simplified rules of thumb regarding variance

inflation factors (e.g. the rule of 4 or the rule of 10) in the literature. Variance inflation factors of 10, 20, 40, or even higher do not, by themselves, invalidate the results of regression analyses, rather the results need to be interpreted in context. In this study, the statistically significant results presented here survive what may be regarded in some instances as increased variance associated with the ith regression coefficient.

	Table	3: IV (2SLS) model results			
	In(Mean requests per person)				
	Coefficient <sup>†</sup>	Coefficient 95% CI	Std. Error	<i>p</i> -value	VIF <sup>†</sup>
Conference expenditure					
Furniture ('0000 (\$AUD))	0.98*	(0.97,1.00)	0.01	0.01	6.56
Christmas hamper ('0000 (\$AUD))	1.00	(1.00,1.01)	0.00	0.60	2.40
Bread run ('0000 (\$AUD))	0.98	(0.96,1.00)	0.01	0.11	2.45
Cash ('0000 (\$AUD))	1.00	(0.97,1.02)	0.01	0.64	1.24
Food conference ('0000 (\$AUD))	1.00*	(0.99,1.00)	0.00	0.04	2.62
Food other ('0000 (\$AUD))	1.01	(0.99,1.04)	0.01	0.33	4.75
Other conf. exp. ('0000 (\$AUD))	1.02	(1.00,1.04)	0.01	0.11	3.03
Vouchers ('0000 (\$AUD))	1.02	(1.00,1.01)	0.00	0.15	3.62
Clothing (\$AUD)	1.00*	(1.00,1.00)	0.00	0.01	5.88
Household (\$AUD)	1.00	(1.00,1.00)	0.00	0.15	2.95
	1.00	(1.00,1.00)	0.00	0.15	2.90
Accommodation	1.05*	(1.00.1.00)	0.00	0.00	F 41
Different addresses	1.25*	(1.20,1.29)	0.02	0.00	5.41
Visits					
Hours per visit (support centre)	0.46*	(0.28,0.79)	0.12	0.00	2.44
Hours per visit (home visits +	0.79	(0.58,1.08)	0.13	0.14	1.67
support centre)					
Hours per visit (home visits)	0.90	(0.68,1.19)	0.13	0.45	3.48
Local area measures	0.70	()	0.10	0.10	0.10
Pop. density (persons/ha)	1.01*	(1.00,1.01)	0.00	0.00	3.29
Unemployment rate (%)	1.00	(0.99,1.01)	0.00	0.00	5.29 5.34
	1.00	(0.99, 1.01)	0.01	0.94	5.34
Spatial lag	1.00	(1.00.1.00)	0.00	0.70	0.00
Spatially weighted lag mean	1.00	(1.00,1.00)	0.00	0.72	2.90
requests per person					
Summary statistics					
Observations	553				
Clusters	79				
Obs. per cluster	7				
F statistic	F(17, 78) = 29.27				
<i>p</i> -value	0.00				
Centered R <sup>2</sup>	0.72				
Uncentered R <sup>2</sup>	0.72				
Summary results for first-stage regression	ns				
Excluded instruments test:					
Hours per visit (support centre)	F(9, 78) = 1045.51				
	<i>p</i> -value = 0.00				
Hours per visit (home visits + support	F(9, 78) = 1045.51				
centre)	<i>p</i> -value = 0.00				
Hours per visit (home visits)	F(9, 78) = 1045.51				
riours per visit (nome visits)	<i>p</i> -value = 0.00				
	p-value = 0.00				
Conductor Minducellan 2 to staf					
Sanderson-Windmeijer $\chi^2$ test of					
underidentification					
Hours per visit (support centre)	$\chi^2(7) = 35569.96$				
	<i>p</i> -value = 0.00				
Hours per visit (home visits + support	$\chi^{2}(7) = 75886.50$				
centre)	p-value = 0.00				
Hours per visit (home visits)	$\chi^2(7) = 35678.96$				
Hours per visit (norme visits)					
	<i>p</i> -value = 0.00				
Sanderson-Windmeijer F test of weak					
identification					
Hours per visit (support centre)	F(7, 78) = 4753.52				
	<i>p</i> -value = 0.00				
Hours per visit (home visits + support	F(7, 78) = 10141.37				
centre)	<i>p</i> -value = 0.00				
Hours per visit (home visits)	F(7, 78) = 4768.09				
רוסמיש אבו אושו נווטווש אושוש)					
Lindenidentifie attendes to sta	<i>p</i> -value = 0.00				
Underidentification tests:					

Table 3: IV (2SLS) model results

H<sub>0</sub>: matrix of reduced form coefficients has rank = K1 – 1 (underidentified) H<sub>A</sub>: matrix of reduced form coefficients has rank = K1 (identified) Kleibergen-Paap rk LM statistic  $\chi^2(7) = 31.68$ 

Reibergen Fuup in Em statistic	p-value = 0.00
Weak identification tests:	,
Ho: equation is weakly identified	
Cragg-Donald Wald F statistic	1578.45
Kleibergen-Paap Wald rk F statistic	3591.50
Weak-instrument-robust inference:	
Tests of joint significance of	
endogenous regressors B1 in main	
equation	
Ho: B1=0 and orthogonality	
conditions are valid	
Anderson-Rubin Wald test	F(9, 78) = 1.72
	p-value = 0.10
Anderson-Rubin Wald test	$\chi^2(9) = 16.56$
	p-value = 0.06
Stock-Wright LM S statistic	$\chi^2(9) = 16.32$
Overidentification test of all	<i>p</i> -value = 0.06
Overidentification test of all	
<u>instruments:</u> Hansen J statistic	$\chi^2(6) = 3.863$
	$\chi$ (6) = 5.005 <i>p</i> -value = 0.70
Instrumented	Hours per visit (support centre), Hours per visit (home visits + support centre) and
Instrumented	Hours per visit (support centre), hours per visit (home visits)
Instruments	L1.Hours per visit (support centre), L1.Hours per visit (home visits + support
instruments	centre), L1.Hours per visit (home visits), L2.Hours per visit (support centre),
	L2.Hours per visit (home visits + support centre), L2.Hours per visit (home visits),
	L3.Hours per visit (support centre), L3.Hours per visit (home visits + support
	centre), L3.Hours per visit (home visits), Furniture ('0000 (\$AUD)), Christmas
	hamper ('0000 (\$AUD)), Bread run ('0000 (\$AUD)), Cash ('0000 (\$AUD)), Food
	conference ('0000 (\$AUD)), Food other ('0000 (\$AUD)), Other conf. exp. ('0000
	(\$AUD)), Vouchers ('0000 (\$AUD)), Clothing (\$AUD), Household (\$AUD),
	Different addresses, Pop. density (persons/ha), Unemployment rate (%),
	Spatially weighted lag mean requests per person, _2011, _2012, _2013, _2014,
	_2015 and _2016

Exponentiated coefficients; Standard errors adjusted for clustering of observations within conferences, 95% confidence intervals in parentheses; Variance inflation factors (VIFs)

Bold denotes results which are statistically significant at P < 0.05. Note: To aid in the interpretation of the instrumental variables reported in Table 2 it should be noted that 'L1' in L1. Hours per visit (support centre) refers to the first order temporal lag. \* The interpretation of the IRR can be explained through the use of an example. A one-unit increase in Hours per visit (support centre), on average, appears to lead to a 49% reduction in the mean number of requests per person. <sup>†</sup> Coefficients and VIFs do not appear for the year fixed effects as these variables are partialled out of the regression.

## **STAGE TWO**

### Stage two – Data

Stage two draws on administrative data recorded by the Society for two conferences, for the months from 2007 to 2016 that have changed from a home visit service delivery model to a support centre model. Note, these conferences continued to conduct home visits on occasions where the person was unwell or frail. Time series analyses of requests per person over the past 30, 90, 180 and 360 days involved the use of several generalized linear models (GLM) estimated by maximum likelihood estimation with Poisson distributional family and log link. Diagnostic checks are reported (e.g. the Augmented Dickey-Fuller unit-root test and the Portmanteau (Q) test for white noise). Further, to abstract from month-specific confounders (e.g. the seasonal provision of Christmas hampers), month fixed effects are adjusted for.

### Stage two – The key variables

For both conferences the dependent variables are requests per person over the past 30, 90, 180 and 360 days by month (Figure 3 and Figure 4). The key independent variable is the support centre variable which takes a value '0' while the home visit model is in effect and '1' when the support centre model is in effect. The other independent variables are the relevant lag terms and month fixed effects. Trend terms are only included when, holding all other things constant, they are found to be statistically significant. The descriptive statistics are reported in Table 4.

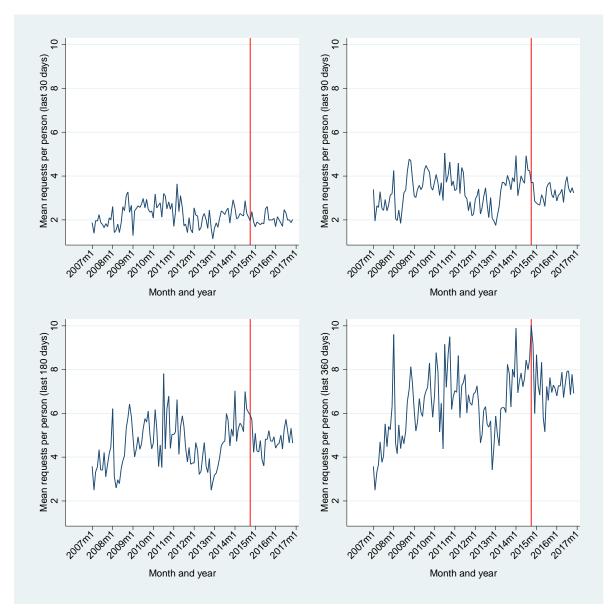


Figure 3: Stage two St Francis conference

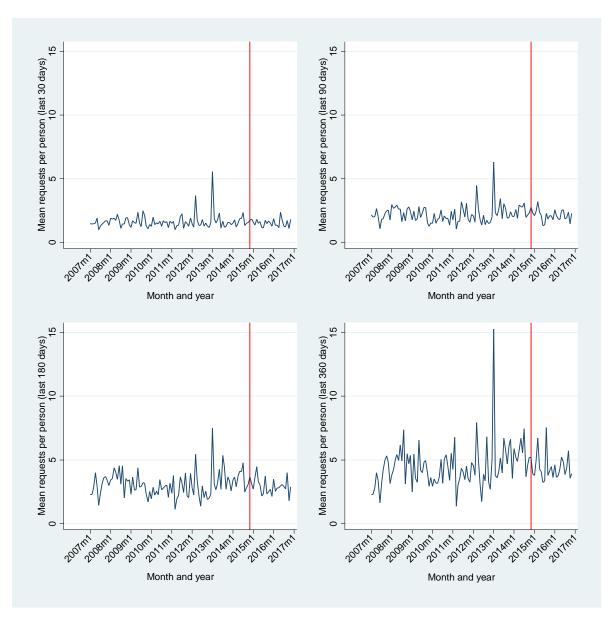


Figure 4: Stage two St Benedict's conference

## Table 4: Descriptive statistics

Variable name	Definition	Obs.	Mean	Std. Dev.	Min.	Max.
St Benedict's, Bald Hills						
Mean requests per person in the	Mean requests per person in the last 30 days	119	1.62	0.52	1	5.56
last 30 days		110	0.01	o. / /	1.07	( 01
Mean requests per person in the	Mean requests per person in the last 90 days	119	2.21	0.66	1.06	6.31
last 30 days		110	2.05	0.00	1 1 2	7 51
Mean requests per person in the last 30 days	Mean requests per person in the last 180 days	119	3.05	0.90	1.12	7.51
Mean requests per person in the		119	4.49	1.62	1.36	15.28
last 30 days	Mean requests per person in the last 360 days	117	1.17	1.02	1.00	10.20
Support centre	Conference is operating a support centre model	119	0.21	0.41	0	1
St Francis Cathedral, Brisbane						
Mean requests per person in the	Mean requests per person in the last 30 days					
last 30 days	mean requests per person in the last so days	119	2.19	0.48	1.13	3.64
Mean requests per person in the	Mean requests per person in the last 90 days					
last 30 days		119	3.31	0.72	1.75	5.05
Mean requests per person in the last 30 days	Mean requests per person in the last 180 days	119	4.64	1.04	2.50	7.81
Mean requests per person in the		119	4.04	1.04	2.30	7.01
last 30 days	Mean requests per person in the last 360 days	119	6.56	1.49	2.50	10.02
Support centre	Conference is operating a support centre model	119	0.22	0.41	0	1

### Stage two - Estimation technique

This stage employs several generalized linear models (GLM) estimated by maximum likelihood estimation with Poisson distributional family and log link, this offered a consistently superior model fit compared to the negative binomial distribution. This method is especially well suited to nonnegative dependent variables that are count variables, which take nonnegative integers, including zero. Robust standard errors and Incident Rate Ratios (IRR) are reported throughout. All tests reported throughout this study are two-tailed tests. Full results are reported in Tables 5 and 6.

Variable names	(1) 30 days IRR 95% CI Std. Error <i>p</i> -value	(2) 90 days IRR 95% CI Std. Error <i>p</i> -value	(3) 180 days IRR 95% CI Std. Error <i>p</i> -value	(4) 360 days IRR 95% CI Std. Error <i>p</i> -value
Support centre Support centre	0.93 <sup>-</sup> (0.87,0.99) 0.03 0.02	0.98 (0.93,1.04) 0.03 0.52	0.98 (0.93,1.04) 0.03 0.55	1.04 (0.97,1.11) 0.03 0.24
<i>30 day lags</i> L1.30 days	1.16 (1.08,1.25) 0.04 0.00			
L10.30 days	1.09° (1.02,1.18) 0.04 0.02			
<i>90 day lags</i> L1.90 days		1.16* (1.10,1.23) 0.03 0.00		
L2.90 days		1.06 <sup>°</sup> (1.00,1.12) 0.03 0.04		
180 day lags L1.180 days			1.08° (1.03,1.12) 0.02 0.00	
L2.180 days			1.06° (1.02,1.10) 0.02 0.00	
L8.180 days			1.04 <sup>°</sup> (1.00,1.08) 0.02 0.04	
<i>360 day lags</i> L1.360 days				1.06* (1.03,1.09) 0.02 0.00
L2.360 days				1.04 <sup>-</sup> (1.01,1.06) 0.01 0.02
Manth fixed affects				

Month fixed effects

<i>iummary statistics</i> Ibservations IC	109 331.02	117 398.93	111 423.69	117 487.45
·	14.02 0.04	12.55 0.52	16.39 0.54	36.83 0.28
· <b>_</b>	(-1.57,-56.53)	(16.45,-32.74)	(22.02,-42.24)	(-32.48,112.89)
symptotic change $\Delta$	-29.05*	-8.15	-10.11	-39.70
	-			-
	0.12	0.08	0.07	0.07
	(0.89,1.36) 0.12	(0.78,1.08) 0.08	(0.76,1.03) 0.07	(0.71,0.97) 0.07
December	1.10	0.92	0.89	0.83 <sup>*</sup>
	0.10 0.36	0.08 0.42	0.08 0.17	0.07 0.04
	(0.91,1.32)	(0.79,1.10)	(0.74,1.05)	(0.71,0.99)
November	1.09	0.93	0.89	0.84*
				0.10
	0.11 0.08	0.08 0.76	0.07 0.98	0.07 0.45
	(0.98,1.40)	(0.87,1.20)	(0.87,1.15)	(0.82,1.09)
October	1.17	1.03	1.00	0.94
	0.12	0.08	0.26	0.08
	(0.91,1.37) 0.12	(0.81,1.14) 0.08	(0.78,1.07) 0.07	(0.80,1.05) 0.06
September	1.11	0.96	0.92	0.91
	0.20	0.93	0.45	0.07
	(0.94,1.33) 0.10	(0.84,1.17) 0.08	0.08	(0.77,1.05) 0.07
August	1.12 (0.94,1.33)	0.99 (0.84,1.17)	0.94 (0.79,1.11)	0.90 (0.77,1.05)
August	1 10	0.00	0.04	0.00
	0.01	0.22	0.19	0.68
	0.12	0.11	0.10	0.08
	(1.05,1.51)	(0.93,1.37)	(0.95,1.33)	(0.82,1.14)
July	1.26*	1.13	1.12	0.97
	0.19	0.82	0.26	0.01
	0.09	0.08	0.07	0.06
	(0.95,1.32)	(0.84,1.15)	(0.79,1.07)	(0.71,0.96)
June	1.12	0.98	0.92	0.82*
	0.34	0.98	0.06	0.01
	0.10	0.09	0.06	0.06
2	(0.91,1.31)	(0.85,1.19)	(0.76,1.00)	(0.72,0.95)
Мау	1.09	1.00	0.87	0.82*
	0.54	0.69	0.07	0.06
	0.10	0.09	0.08	0.08
I I	(0.88,1.26)	(0.81,1.15)	(0.71,1.02)	(0.71,1.01)
April	1.06	0.96	0.85	0.84
	0.28	0.96	0.13	0.02
	0.12	0.09	0.07	0.07
	(0.91,1.38)	(0.85,1.19)	(0.75,1.04)	(0.70,0.97)
March	1.12	1.00	0.88	0.83*
	0.22	0.24	0.18	0.05
	0.12	0.09	0.08	0.08
	(0.92,1.41)	(0.73,1.08)		(0.69,1.00)

BIC	371.39	440.36	467.04	528.89
Augmented Dicky-Fuller tests				
Random walk (Z statistic)	-1.20	-1.08	-1.09	-0.95
Random walk (Interpolated Dickey-Fuller 5% Critical value)	-1.95	-1.95	-1.95	-1.95
Random walk with drift (Z statistic)	-6.75	-5.52	-6.14	-5.95
Random walk with drift (Interpolated Dickey-Fuller 5% Critical value)	-2.89	-2.89	-2.89	-2.89
Random walk with drift and deterministic trend (Z statistic)	-6.81	-5.52	-6.30	-6.74
Random walk with drift and deterministic trend (Interpolated Dickey-Fuller 5% Critical value)	-3.45	-3.45	-3.45	-3.45
White noise tests				
Portmanteau test (Lag (3))	Portmanteau (Q) statistic = 4.65 <i>p</i> -value = 0.20	Portmanteau (Q) statistic = 0.48 p-value = 0.92	Portmanteau (Q) statistic = 0.19 p-value = 0.98	Portmanteau (Q) statistic = 2.68 p-value = 0.44
Portmanteau test (Lag (20))	Portmanteau (Q) statistic = 19.69 p-value = 0.48	Portmanteau (Q) statistic = $28.96$ p-value = $0.09$	Portmanteau (Q) statistic = $28.36$ p-value = $0.10$	Portmanteau (Q) statistic = 30.39 p-value = 0.06
Portmanteau test (Lag (5))	Portmanteau (Q) statistic = $6.44$ p-value = $0.27$	Portmanteau (Q) statistic = $3.22$ p-value = $0.67$	Portmanteau (Q) statistic = $5.76$ p-value = $0.33$	Portmanteau (Q) statistic = 7.53 p-value = 0.18
Cumulative periodogram test	Bartlett's (B) statistic = 0.68 p-value = 0.73	Bartlett's (B) statistic = 0.74 p-value = 0.65	Bartlett's (B) statistic = 0.57 p-value = 0.90	Bartlett's (B) statistic = 0.79 p-value = 0.55

Exponentiated coefficients (Incident rate ratios (IRR)); Robust standard errors are used. p < 0.05

Variable names	(1) 30 days IRR 95% CI Std. Error <i>p</i> -value	(2) 90 days IRR 95% CI Std. Error <i>p</i> -value	(3) 180 days IRR 95% Cl Std. Error <i>p</i> -value	(4) 360 days IRR 95% CI Std. Error <i>p</i> -value
Support centre Support centre	0.90 (0.82,1.00) 0.05 0.05	0.87 <sup>-</sup> (0.76,1.00) 0.06 0.05	0.95 (0.86,1.05) 0.05 0.34	0.85 <sup>-</sup> (0.73,0.98) 0.06 0.02
<i>30 day lags</i> L10.30 days	1.20* (1.02,1.42) 0.10 0.03			
L18.30 days	1.11* (1.03,1.20) 0.04 0.01			
L23.30 days	1.07* (1.01,1.14) 0.03 0.03			
L31.30 days	1.15* (1.05,1.25) 0.05 0.00			
L40.30 days	1.14 <sup>*</sup> (1.04,1.24) 0.05 0.00			
<i>90 day lags</i> L6.90 days		1.10 <sup>°</sup> (1.03,1.18) 0.04 0.00		
L17.90 days		1.10 <sup>°</sup> (1.03,1.17) 0.04 0.00		
L41.90 days		1.15 <sup>*</sup> (1.05,1.25) 0.05 0.00		
L44.90 days		1.09 <sup>.</sup> (1.01,1.17) 0.04 0.03		
<i>180 day lags</i> L6.180 days			1.08° (1.03,1.13)	

			0.03 0.00	
<i>360 day lags</i> L9.360 days				1.05 <sup>°</sup> (1.02,1.07) 0.01 0.00
L10.360 days				1.08 <sup>°</sup> (1.04,1.11) 0.02 0.00
L31.360 days				1.06 <sup>°</sup> (1.03,1.09) 0.02 0.00
L49.360 days				1.06* (1.00,1.11) 0.03 0.04
Month fixed effects				
February	0.75	0.81	0.97	0.76
	(0.56,1.02)	(0.52,1.27)	(0.70,1.35)	(0.52,1.10)
	0.12	0.18	0.16	0.14
	0.07	0.36	0.85	0.14
March	0.88	0.94	0.98	0.70
	(0.55,1.39)	(0.56,1.57)	(0.66,1.47)	(0.44,1.13)
	0.21	0.25	0.20	0.17
	0.58	0.80	0.94	0.15
April	0.74 <sup>-</sup>	0.93	0.95	0.67 <sup>-</sup>
	(0.56,0.98)	(0.60,1.43)	(0.67,1.34)	(0.47,0.94)
	0.11	0.21	0.17	0.12
	0.03	0.74	0.77	0.02
Мау	0.80	0.89	1.01	0.68 <sup>°</sup>
	(0.58,1.12)	(0.56,1.42)	(0.70,1.44)	(0.47,0.99)
	0.14	0.21	0.18	0.13
	0.19	0.62	0.97	0.05
June	0.77	0.69	0.96	0.58 <sup>-</sup>
	(0.57,1.04)	(0.42,1.15)	(0.65,1.40)	(0.39,0.86)
	0.12	0.18	0.19	0.12
	0.09	0.16	0.83	0.01
July	0.77	0.78	0.98	0.71
	(0.55,1.08)	(0.49,1.22)	(0.70,1.37)	(0.48,1.04)
	0.13	0.18	0.17	0.14
	0.13	0.28	0.90	0.08
August	0.62 <sup>°</sup>	0.70	0.96	0.65 <sup>*</sup>
	(0.46,0.84)	(0.46,1.09)	(0.67,1.37)	(0.43,0.99)
	0.10	0.16	0.17	0.14
	0.00	0.11	0.82	0.05
September	0.73 <sup>•</sup>	0.70	0.91	0.73
	(0.54,0.97)	(0.43,1.14)	(0.63,1.31)	(0.50,1.07)
	0.11	0.17	0.17	0.14
	0.03	0.15	0.62	0.11

October	0.72*	0.62*	0.84	0.57*
October	(0.53,0.96)	(0.39,0.99)	(0.60,1.18)	(0.39,0.84)
	. ,			• • •
	0.11 0.03	0.15	0.15	0.11
	0.03	0.04	0.32	0.00
November	0.63*	0.72	0.83	0.56*
	(0.42,0.94)	(0.46,1.14)	(0.58,1.17)	(0.36,0.88)
	0.13	0.17	0.15	0.13
	0.02	0.17	0.28	0.01
	0.02	0	0120	0.01
December	0.73*	0.75	0.90	0.61*
	(0.54,0.97)	(0.49,1.15)	(0.65,1.25)	(0.43,0.87)
	0.11	0.16	0.15	0.11
	0.03	0.18	0.53	0.01
Asymptotic change				
% Δ	-14.23*	-29.93*	-63.46	-63.92
	(-1.99,-26.46)	(-8.14,-51.72)	(69.74,-196.65)	(-16.47,-111.35
	6.24	11.12	67.96	24.20
	0.02	0.01	0.35	0.01
Summary statistics	0.02	0.01	0.30	0.01
Observations	79	75	113	70
AIC	283.31	246.29	389.51	292.47
BIC	322.54	285.69	427.70	330.70
Augmented Dicky-Fuller	522.0 T	200.07	121.10	000.70
tests				
Random walk (Z statistic)	-2.33	-2.11	-2.08	-2.50
Random walk (Interpolated	-1.95	-1.95	-1.95	-1.95
Dickey-Fuller 5% Critical	1.75	1.75	1.75	1.75
value)				
Random walk with drift (Z	-10.59	-9.72	-9.95	-10.06
statistic)				
Random walk with drift	-2.89	-2.89	-2.89	-2.89
	-2.07	-2.07	-2.07	-2.07
(Interpolated Dickey-Fuller				
5% Critical value)				
Random walk with drift and	-10.54	-9.69	-9.90	-10.22
deterministic trend (Z				
statistic)				
				_
Random walk with drift and	-3.45	-3.45	-3.45	-3.45
deterministic trend				
(Interpolated Dickey-Fuller				
5% Critical value)				
White noise tests				
Portmanteau test (Lag (3))	Portmanteau (Q)	Portmanteau (Q)	Portmanteau (Q)	Portmanteau (0
	statistic = 0.51	statistic = $0.91$	statistic = 1.41	statistic = 3.74
	p-value = 0.92	p-value = 0.82	p-value = 0.70	<i>p</i> -value = 0.29
Portmanteau test (Lag (20))	Portmanteau (Q)	Portmanteau (Q)	Portmanteau (Q)	Portmanteau (0
1  or timulture to st (Lay (20))	statistic = $23.44$	statistic = $25.61$	statistic = $26.86$	statistic = 14.7
	p-value = 0.27	p-value = 0.18	p-value = 0.14	p-value = 0.79
Dortmantoau tost (Log (E))				
Portmanteau test (Lag (5))	Portmanteau (Q)	Portmanteau (Q)	Portmanteau (Q)	Portmanteau (C
		statistic = 2.00	statistic = 3.44	statistic = 4.38
	statistic = 1.12	1 0.07	1	
	<i>p</i> -value = 0.95	<i>p</i> -value = 0.85	p-value = 0.63	
Cumulative periodogram	<i>p</i> -value = 0.95 Bartlett's (B)	Bartlett's (B)	Bartlett's (B)	<i>p</i> -value = 0.50 Bartlett's (B)
	<i>p</i> -value = 0.95			

Exponentiated coefficients (Incident rate ratios (IRR)); Robust standard errors are used. p < 0.05

# Table 7: Interview schedule

Question	Why	Probes	Field notes
Tell us about yourself,	Background	Motivation: eg faith, spare time,	
what moved you to become a Vincentian		altruism, fellowship, CV building etc	
and your volunteer			
history?			
What, in your personal	Personal, as opposed to party	Alignment between articulated Society	
view, is the purposes	(Society), line	mission and vision, and personal	
and ultimate objectives		perspective.	
of the services you provide to Vinnies		Is this consistent with most of the other members of your conference?	
clients?			
Generally speaking,			
what do you think are			
the things we			
Vincentians do, that make a positive impact			
on people's lives?			
Can you describe a	Contextual examples	What role did you personally play in	
critical incident	· ·	these incidents to draw out the either	
(example) that highlights		positive or negative outcomes?	
1) a positive outcome &			
2) a negative one? We are particularly	Suitability for sample.	How long combined/with each model?	
interested in what	Sunability for sumple.	Not very interested in why the decision	
difference there is		was made but interested in how	
between the home visit		Vincentian responded to the model	
and support centre		change.	
models. Have you		Did you have a preference for one or	
experienced both as a Vincentian?		the other? Explain Ascertaining whether Vincentian or	
VIIICEIIIIdII?		client is locus of concern	
Could you now describe	Home visit deep dive	Lead or support?	
how you approached		(in)convenience eg	
home visits? In		roster/logistics/travel etc	
particular, what made		Power vs vulnerability	
them effective and what were their limitations?		Intrusion vs welcome	
were their infitations?		Homeliness vs wrap around services Referrals	
		Focus on what <i>Vincentian</i> did/didn't	
Let's now look at the	Change shock/openness	do Did any co-members resign? Change	
support centre model.	Shunge shooly openhoss	in leadership group	
How did you initially		Support from	
respond to the change?		regional/Diocese/Merivale?	
Could you now describe	Support centre visit deep dive	Lead or support?	
how you approached		(in)convenience eg	
support centre assignments? In		roster/logistics/travel etc Power vs vulnerability	
particular, what makes		Intrusion vs welcome	
them effective and what		Homeliness vs wrap around services	
were their limitations?		Referrals	
		Focus on what Vincentian did/didn't	
		do	
We'd now like to focus in	Comparative deep dive	Did the same people come, which	
specifically on the effect		groups of clients/their nos	
that these two models		increase/decrease? 'No-shows'	
have on the people the Society seeks to assist.		change? Did client expectations change?	
JULIELY JEEKS IU 033131.	1	Change:	

Which has the better outcomes do you think?			
Has the way in which clients interact with Vincentian changed across these models?	Posture/identity/power etc	Body language, behaviour, gratefulness/entitlement/	
Which model do you think makes the greatest difference to the lives of the people we try to assist?	Impact	Drill down to specific comparative examples. Repeat critical incident technique if useful	
If we use as a benchmark success as people have having to access Vinnies frequently, which model do you think works best?	Impact	Yah or nay – nailing them down! Do you think the two models achieve the same positive outcome for the people we assist?	