

Planning, Development, and Evaluation of a Public Health
Newsletter for Primary Care Healthcare Workers in a Regional City
in Victoria, Australia

By

Dr. N. Deborah Friedman MBBS (Hons), FRACP, MD

A Master's Paper submitted to the faculty of
The University of North Carolina at Chapel Hill
in partial fulfillment of the requirements for
the degree of Master of Public Health in
the Public Health Leadership Program.

Chapel Hill

2010

Advisor signature/printed name

Second Reader Signature/printed name

Date

Abstract

Continuing medical education must stimulate and maintain the interest and participation of physicians, by identifying and meeting their educational needs. Educational material for busy professionals must be concise with a format suited to the reading audience. Public Health newsletters have the potential to reach a large audience, and are not costly to prepare. There has never been such a Public Health newsletter available for community healthcare workers in our regional city of Geelong, in Victoria, Australia. This thesis explores the key stages involved in planning, developing, and evaluating a Public Health newsletter for healthcare Workers in this region.

A working party, developed in 2008, oversaw the creation of a vision, format and content for the monthly newsletter which launched in February 2009. An evaluation of the newsletter was undertaken in February 2010 via a survey to gauge the utility and relevance of the newsletter. More than 80% of respondents found the newsletter useful, interesting, informative and relevant to their practice, and nearly 90% thought the bulletin was the right length. Positive feedback was also received about the inclusion of pictures and graphs in the newsletter. The newsletter continues to expand both its list of contributing authors and its distribution list. Further evaluations may be required in the future to determine the direction of the newsletter.

Introduction

The wider areas of the Bellarine peninsula and the Great Ocean Road encompass a total population of approximately 400,000 people. Geelong is the second largest city in Victoria, Australia with a population of 160,000 people. Barwon Health is the tertiary care healthcare network present in Geelong, which serves the entire region, and traditionally has had close ties with family medicine doctors. There has never been any form of Public Health alert correspondence based on local surveillance data available for family medicine doctors, school nurses and community maternal-child health centers in our region that practice primary care. This thesis explores the planning, development, and evaluation of a Public Health newsletter for healthcare workers in our region of Victoria, Australia.

Dissemination of data is the element of surveillance which has received the least attention [1]. Such surveillance data should be disseminated regularly, and the methods which may be used are numerous, including newsletters, journals, electronic reporting and use of the media. Importantly, data should be disseminated via a method which will reach persons who are involved in direct patient care [1]. The format which is used to provide information is of major importance and is dependent on the targeted audience. While epidemiologists and statisticians may prefer very detailed data, clinicians may find simple graphical data more useful. In particular, the impact of visual presentation of data must not be minimized [1].

Busy clinicians are time pressured, and may not respond well to all methods of notification about communicable diseases, or to methods of general Public Health education. Because of the pressure for timely, informed decisions in clinical practice and the explosion of information in the scientific literature, research results must be synthesized [2].

Continuing Medical Education

Disseminating Public Health information may be viewed as one component of continuing medical education (CME). In 2002, over 150 leaders and experts from health professions education, regulation, policy, advocacy, quality, and industry attended the Health Professions Education Summit to discuss strategies for restructuring clinical education to be consistent with the principles of the 21st-century health system [3].

The report from this summit concludes that “doctors, nurses, pharmacists and other health professionals are not being adequately prepared to provide the highest quality and safest medical care possible....” One contributing factor to this problem is the absence of a comprehensive and well-integrated system of continuing education in the health professions [4].

Improving CME has been the topic of much research. Stimulating and maintaining the interest and participation of physicians in formal CME activities, identifying and meeting physicians' educational needs, and motivating physicians to get involved in any kind of CME initiative are problems, which are encountered by those who organize CME [5].

In recent years, interactive online CME and videoconferencing have become a popular way to provide continuing education to working medical professionals [6, 7]. However, some researchers have found that even when online CME is free for physicians; it has less reach than direct mail [6]. In addition, medical newsletters have been rated highly by general practitioners (GPs) as a means of CME, while overseas conferences are rated highly by non-GPs [8].

Compared with conferences or formal journal instructional methods of medical education, a newsletter may consistently reach a larger audience at a fraction of the cost [9].

Despite the lack of expense, the greater convenience and potentially wider reach of printed educational materials, they have little effect overall on professional practice. A meta-analysis of studies examining the effect of printed educational materials on the professional behavior of physicians and patient outcomes found that "...the effects of printed educational materials compared with no active intervention appeared, at best, small across studies, and of uncertain clinical significance" [10].

The implication of this data is that simply providing information may not lead to appropriate changes in the practice of health care professionals, despite the imperative for ongoing CME.

The Institute of Medicine's (IOM) 2003 report entitled "Health Professions Education: A Bridge to Quality" recommends that students and working professionals develop and maintain proficiency in five core areas [3]:

- Delivering patient-centered care,
- Working as part of interdisciplinary teams,
- Practicing evidence-based medicine,
- Focusing on quality improvement and
- Using information technology.

Essential Public Health Services

From a Public Health perspective, the essential Public Health services include (but are not limited to) the following [11]:

- Monitor health status to identify and solve health problems
- Inform, educate and empower people about health issues
- Mobilize community partnerships and action to identify and solve health problems
- Link people to needed personal health services and assure the provision of healthcare when otherwise unavailable
- Assure competent public and personal care workforce

Public Health therefore plays an important role in providing both information and resources to improve health. However, the effective use of such resources needs to be considered when choosing strategies to inform and educate the healthcare workforce.

Public Health Newsletters

The preparation of Public Health newsletters available in hard copy by direct mail, as well as electronically have been widely used, with models for communicable diseases newsletters already in existence in other locations internationally. The World Health Organization (WHO) publishes a newsletter from its Southeast Asian office regarding global communicable diseases [12]. The Centers for Diseases Control and Prevention (CDC) publish the Morbidity and Mortality Weekly Report (MMWR), and surveillance summaries, which provide in-depth analyses and interpretations of data on surveillance topics which range from nosocomial infections to asthma and ectopic pregnancy [13]. At a state level, the New Jersey Department of Health and Senior Services publishes a quarterly communicable diseases newsletter, NJ Communi-CABLE [14].

At the county level, different counties in Washington State publish newsletters every 1-3 months regarding Public Health issues and current disease statistics [15].

For example, King County's Epi-Log newsletter is produced monthly and contains articles about current health issues in King County, such as recent outbreaks, vaccination programs, cases of unusual infectious diseases, and background articles on new and emerging infectious diseases [16]. Also included in each issue is a table of disease reports received the previous month, and historical data on disease reports from the previous year [16].

Locally, the Australian Department of Health and Ageing maintain a communicable diseases webpage which provides information about important infections such as Avian Influenza, HIV/AIDS, Hepatitis C and Bovine Spongiform Encephalopathy, and disseminates timely information about communicable/notifiable diseases [17]. A publication, Communicable Diseases Intelligence reports such surveillance data from Australia [17].

At the Victorian state level, The Department of Health maintains an immunization webpage with facts sheets for patients and information for healthcare providers regarding vaccine scheduling and availability [18]. A newsletter is also published quarterly including the same types of information targeting healthcare providers and it can be accessed either through their website or via subscribing to receive the publication electronically [19].

To date there have not been newsletters developed within our state for specific regions, analogous to U.S county level endeavors. In Australia, as is the case in many countries, disease epidemiology varies geographically, such that locally-based educational information about a wide range of communicable diseases is desirable. Furthermore, there is no newsletter available in our state for GPs about conditions which are not vaccine-preventable and which selects topics that mirror seasonal trends in infectious diseases. In light of this gap in regional Public Health education, especially for GPs, the Infectious Diseases Department of Barwon Health joined with the General Practitioner's Association of Geelong (GPAG) to consider developing an educational curriculum in newsletter form about Infectious Diseases and their trends.

Methods

Engage Stakeholders: September 2008

The Department of Infectious Diseases and GPAG were interested in the possibility of developing an educational newsletter for family medicine doctors and other healthcare workers in the region. This interest culminated in key stakeholders from both Barwon Health and GPAG meeting in September of 2008 to discuss the potential for collaboration on this venture. Potential stakeholders were selected by the secretary of GP liaison at Barwon Health based on those thought to have expertise and interest in this venture. These stakeholders included: Director of the Infectious Diseases Department, Director of Pediatric International Health, the Microbiologist from Pathcare laboratory, an Emergency Medicine attending, the Medical Advisor of GPAG, and the Health Promotion secretary at GPAG. I was invited to this meeting to discuss the potential for my involvement in this project.

The idea of a Public Health educational newsletter focusing on pertinent communicable diseases was discussed. Widespread agreement and support was obtained from all stakeholders present. Representatives from Pediatrics, and Emergency Medicine expressed their desire for peripheral involvement in the project, including providing some articles for publication but without other oversight responsibilities.

A working party was formed with members from the collaborative organizations who expressed enthusiasm in further planning the development of the newsletter. This working group included myself (an Infectious Diseases physician who is completing a Master's of Public Health degree), Dr. Jane Opie, Mrs. Sandra Grace, and Ms. Natalie Virgo Milton. Dr. Opie, a practicing family medicine physician (GP), serves as the medical advisor to GPAG, and has experience and interest in CME for GPs. Mrs. Grace is employed by Barwon Health as the secretary of GP liaison, serves a key role as an intermediary between GPAG and Barwon Health, and has a good knowledge and rapport with staff at both organizations. Ms. Virgo Milton completed a degree in Health promotion, and is employed as GPAG's health promotion secretary. Of this four-person working party, Dr. Opie currently works closely with Ms. Virgo Milton at GPAG, and had worked previously with Mrs. Grace. This served as my first meeting with the other members of the working party.

Newsletter Vision, Purpose and Operations: October 2008

Meetings of the working party initially focused on developing the key purpose and vision for the newsletter. Broad agreement was reached on the concept of a monthly newsletter whose purpose was to reach healthcare providers in our region with evidence-based educational material about communicable diseases and practical information about diagnosing and treating such conditions.

The newsletter bulletins content would attempt to mirror the seasonal trends in infection occurrence, and each month would contain either one or two key topics per month, in addition to health alerts about current Public Health news requiring dissemination. In this way, the newsletter's approach to education would aim to be both proactive and reactive.

The option of seeking funding for the production of this newsletter so as to allow employment of a part-time secretary was considered. Several sources of funding were discussed, including grants awarded from the State Department of Health. However prospects for these funding applications were hampered by the facts that closing dates had already passed for 2008 and that none of these grants were entirely suitable for a pilot project of this small size. All working party members concurred that aiming for a start in production of the newsletter for February 2009 was the current priority. Therefore, it was envisioned that such a newsletter would commence as a non-funded project, requiring only the time of the contributors and the costs of paper, printing and distribution, all of which would be borne by GPAG. The monthly operations of the newsletter would be the responsibility of GPAG's health promotion secretary (NVM) and the Infectious Diseases physician and main contributor (NDF).

The roles of the health promotion secretary would include scheduling meetings, keeping minutes of meetings, monthly reminders to contributing authors, formatting and printing of the bulletin.

The roles of the physician would include provision of articles for monthly bulletins, overall content of bulletins, final editing of each bulletin, inviting contributing writers to provide articles, as well as planning the evaluation of the newsletter in the future. Support for the operations of the newsletter project would be available from other members of the working party and other key stakeholders from the collaborative organizations. If well received, this project could result in improved knowledge about communicable and infectious diseases relevant in our region, and subsequently optimal investigation and management of such conditions.

Planning Newsletter Format: October 2008

The working party determined that the Public Health newsletter should have a concise format with content suitable for both doctors and other healthcare professionals in the community. In addition, it should be produced monthly and be available in electronic and hard copy formats. Electronically, it could be accessed via a link from the websites of collaborators; Barwon Health, and the General Practitioner's Association of Geelong (GPAG). Old issues of the newsletter would also be archived on these websites. Hard copies could arrive by either post or fax to subscribers.

A mock format of the newsletter was developed through donated secretarial and design time to meet content specifications, and the first edition of the newsletter was planned for February 2009. The newsletter design incorporated the representative logos of all key collaborators (GPAG, Barwon Health, and Pathcare, Microbiology), in addition to planned development of a new, recognizable logo for the newsletter itself.

Newsletter Name and Logo: October- November 2008

The working party discussed the key components of the newsletter's name. It was decided that the name ought to reflect our region, and include mention of either infections or communicable disease surveillance.

The acronym "GOCATS" was selected to stand for: Geelong's Own Communicable Alert Trend Surveillance". "Go Cats" is a common cry in the region from supporters of the Australian Rules Football Team, The Geelong Cats, and it was felt that this link to a very popular local sporting club would find favor among local healthcare workers. Following development of the newsletter name, a graphic designer was commissioned (pro-bono) to create a logo for GOCATS. Four different logos were created, and the working party unanimously selected the logo most preferred.

Logic Model for Newsletter: October 2008

A logic model was constructed in order to graphically display the inputs to the project, the required activities, and the desired outcomes both in the short and longer term (see Appendix 1). Short-term outcomes were that most GPs in the region would be familiar with GOCATS, would be more knowledgeable about the diseases covered and would have found the newsletter useful. Longer term outcomes were for an evaluation of the GOCATS project at 12-18 months via a survey to determine both the utility and the optimal method of delivery of the newsletter. Ultimately some of the proposed impacts of the newsletter were enhanced specimen collection by family medicine physicians, reduction in inappropriate antibiotic prescribing, and fewer unnecessary emergency department referrals by medical practitioners for conditions which can be well managed in the community.

Timeline of Topics-December 2008

A timeline of topics and suggested contributing authors to be included in the first 6 months of the GOCATS newsletter was created. The timeline reflected the seasonal variation in infections and current worrisome trends. For example, the increase in the number of cases of Pertussis (whooping cough), and Chlamydia were highly topical at the time of the newsletter development, as was the hot spot for Buruli Ulcer (Bairnsdale Ulcer) in our local region.

Suggested contributing authors were contacted in order to invite them to contribute an article for publication. The acceptance rate among invited contributors was 100%.

Following the initial timeline, the calendar of topics was developed 6 months at a time. A contributing author's pro forma was developed and provided to authors in order to simplify and guide the process involved in article preparation (see Appendix 2).

Distribution List: December 2008

The distribution list for the newsletter initially mirrored the listings held by GPAG for family medicine practices in the region, including 270 doctors. However, other interested parties, such as community health nurses and school nurses were added to the circulation list if they requested a subscription. Subscription is free of charge, and distribution is also predominantly free, as hard copy newsletters for all medical practices are delivered free of charge by pathology couriers.

Newsletter Launch-February 2009

A GOCATS launch evening was held in February 2009, to coincide with the first edition of the newsletter. Local family medicine doctors in our region, and key stakeholders from Barwon Health and Pathcare, Microbiology attended an evening launch with an educational format, including lectures on topics including tropical medicine, and sexually transmitted infections. In addition, an introduction to the concept of the GOCATS bulletin was presented to the audience.

Newsletter Rollout- 2009

The GOCATS newsletter began distribution in February 2009, and a monthly bulletin has been created to date (see Appendix 3). The distribution list has expanded to include many community clinics and school nurses, and the list of contributing authors now includes many specialists and general practitioners with a special interest area.

Evaluation Planning- December 2009

The GOCATS working party along with key stakeholders met at the end of 2009 to discuss the progress to date with the newsletter and to plan for an evaluation of the project.

A survey for healthcare workers who form the reading audience of GOCATS was chosen as the optimal method for evaluation as it is an inexpensive and simple tool with which to ask multiple questions of the respondents. A short (2 page) survey focusing on gauging the beneficial impact of the newsletter was developed by the Infectious Diseases physician and main contributor (NDF), and refined with the assistance of Dr. Opie from GPAG.

The survey asked respondents for their opinion about every topic covered in previous issues of the bulletin, and sought their advice about future topics to be covered. Importantly, the survey asked respondents whether or not the GOCATS newsletter was useful to them in their medical practice (see Appendix 4).

The evaluation survey was delivered to the reading audience of the GOCATS bulletin in February 2010, 1 year after circulation of the newsletter began.

Evaluation Data Management & Analysis- February-April 2010

Evaluation surveys were returned to GPAG between February and April 2010. In order to maximize responses, all medical practices on the distribution list were contacted in March 2010 requesting the return of completed surveys. Survey data was entered in to an Excel spreadsheet for data management and analysis. The survey was internally analyzed by the main newsletter contributor (NDF).

Results

Evaluation Survey

The GOCATS survey was completed by 91 medical practitioners, which represents a response rate of 34%. Of those doctors who responded to the survey, 83 were aware of the existence of the GOCATS newsletter and completed the subsequent questions.

Sixty-one of 83 respondents (73%) said they read the newsletter often or always, and more than 68 respondents (82%) found the newsletter useful, interesting, informative and relevant to their practice.

With regard to the format of the newsletter, 87% of respondents thought that the GOCATS bulletin was the right length, and positive feedback was received about the inclusion of pictures and graphs.

The most frequently cited favorite topics covered in the newsletter were Pertussis, cat and dog bites, spider bites, Bairnsdale ulcer and STI screening/vaginal discharge. There were no topics covered which respondents disliked. Several suggestions were provided for topics to be included in future issues of the newsletter. These included more articles on travel medicine, prophylactic antibiotics, communicable eye infections, wound infections, viral exanthems of childhood, and needlestick injuries.

Future Planning

Monthly issues of the newsletter are continuing to be produced in 2010 with an expanding number of contributors from different medical disciplines. A timeline of topics has been compiled through to December 2010, with inclusion of topics suggested by survey respondents. The main contributor is currently able to continue to provide regular evidence-based articles; however, overseeing the overall content of each bulletin, proof reading, inviting and reminding contributing writers are tasks which should ideally be delegated to other people to reduce the monthly burden of work. Future planning may involve inviting other relevant GPAG or Barwon Health staff to join the working party or seeking funding for an administrative or secretarial staff member to share the responsibilities of producing GOCATS. Alternatively, making changes to the frequency of bulletin production and inclusion of other, non-infectious conditions remain possibilities to consider with regard to future planning. Therefore, the sustainability of the newsletter beyond 2010 is yet to be determined.

Sustainability

Current working party members have renewed their commitment to the newsletter for at least 2010, and GPAG continues to bear the cost for printing and distribution of the newsletter.

Those Barwon Health and GPAG staff involved in the production of GOCATS receive their usual salary but no additional payments for work related to the newsletter. The majority of the authorship work and oversight continues to be done by the Infectious Diseases physician and main contributor (NDF).

Despite a larger number of occasional contributors and the limited expense of this venture, the enthusiasm of the working group for undertaking this extra, unpaid work will need to be maintained in the long-term if GOCATS is to continue. In addition, those working to produce the newsletter will require ongoing positive feedback or ideally some measure of assurance from the reading audience that GOCATS is indeed worthwhile.

Discussion

Educational newsletters are a convenient and inexpensive method of reaching a larger reading audience than other methods of CME [9, 10]. The GOCATS newsletter was developed to fulfill the role of an evidence-based, educational newsletter for family medicine doctors and other healthcare providers in the Barwon region of Victoria, Australia. It represents collaboration between the tertiary care medical center in the region, the family medicine doctors association (GPAG) and local pathology services. Furthermore, it represents a commitment to addressing health problems through education of practitioners.

The recommended essential Public Health services [11], acted as a guiding principle in this project. Surveillance of microbiology data to detect important trends in infections in our community is an example of monitoring health status to identify and solve health problems. The newsletter's bulletins fulfilled the informing, educating and empowering of clinicians about health issues, and our stakeholders allowed for formation of important partnerships in our community. Addressing refugee health issues in our newsletter, and advertising our hospital's refugee clinic has linked people with health services, which would otherwise be unavailable. Finally, our approach to education confirms our commitment to assuring a competent public and personal care workforce [11].

The planning and development of the newsletter was undertaken by a working party over 3 months, culminating in the launch of the GOCATS bulletin in February 2009. Implementation of the project consisted of the production and distribution of monthly editions of the newsletter. An evaluation of the GOCATS newsletter was undertaken one year after the bulletin commenced in circulation in order to gauge the utility of the project, and plan for the future of the project.

The evaluation revealed a preference by readers for a hard copy newsletter delivered by direct mail. Although direct mail is more costly than electronic methods of mail delivery, it appears that busy healthcare professionals may both favor and be more likely to read CME, which is in hard copy format. This result from our evaluation is in keeping with some previous research, which has found direct mail a more effective strategy than free online medical education [6]. However, there is a potential risk in placing too much emphasis on the importance of posting our newsletter. Unsolicited posted mail to physicians, even educational newsletters, must take its place in mailboxes alongside brochures for meetings, solicitations from financial institutions, magazines and elaborately packaged pharmaceutical promotions [20]. The result is that such mail is often unwelcome and may well go unread, and research to date reveals a very limited effect of printed educational materials on altering medical practice [10].

The evaluation survey was completed by only one-third of family medicine physicians, and was analyzed internally. These factors together represent the biggest limitations to forming clear conclusions about the utility of the newsletter. An internal evaluation such as this one is simple and informal but is neither independent nor impartial. Despite all family medicine practices being contacted in March 2010 to request completion of the survey the response rate remained suboptimal. There is no way to know whether the non-respondents had a different opinion of GOCATS than respondents. Although there is the possibility of a response bias, it is unlikely given the relatively homogeneous reading audience and the exclusion of leading or loaded questions in the survey. In addition, despite the modest response rate to the survey, the general verbal feedback about GOCATS to the working party from healthcare workers in our region on an ongoing basis is overwhelmingly positive. In addition, the experience of GPAG is that surveys sent to family medicine doctors are notorious for a poor response rate given their lack of protected time during the working day for non-clinical tasks.

Unfunded projects such as the GOCATS newsletter project can be marred by problems related to sustainability. Over time the enthusiasm of main contributors may wane, which indicates that both an expanding list of authors and applications for funding should be part of the future plans for the project. Further decisions regarding division of responsibilities within the working group may also be required in the future to determine the direction of the newsletter.

Three members of the working party, Drs. Friedman and Opie and Ms. Virgo Milton, have provided ample ongoing support for the project, and working relationships have always been respectful and collaborative in both spirit and practice without conflict. Unfortunately, for personal reasons Mrs. Grace was unable to maintain involvement in the working party, however she was present throughout the early formative period of GOCATS and for this reason her subsequent absence likely did not have serious negative consequences on the liaison between GPAG and Barwon Health. More peripheral stakeholders such as those from the Departments of Emergency Medicine and Pediatrics have had a limited involvement in the project overall aside from preparation of a few articles for publication. In addition, although the Pathcare laboratory is enthusiastic about and supportive of the GOCATS project, retrieving epidemiology trend data from the laboratory has occasionally proven difficult to obtain.

Despite the above limitations, the evaluation revealed that many of the short and longer-term goals of the GOCATS newsletter were reached. In particular, the working party was satisfied that the majority of those who read the newsletter are in favor of its content, utility and relevance to their practice, and see the newsletter as a valuable tool in medical education.

Some of the proposed possible impacts of the GOCATS project, such as unnecessary emergency department referrals for various medical conditions may be measurable in the future through hospital databases, while other impacts like reduced antibiotic prescribing for viral illness will however be more difficult to measure at a community level without significant analysis.

There is however, data to support carefully planned multifaceted educational interventions for family physicians, as a way of both improving practices and patient outcomes [21-23]. In this way, printed educational materials may have a predisposing effect for change, although they are not sufficient in themselves to achieve a substantial impact upon practice [10].

In order to be both proactive and reactive in our approach to education, the GOCATS working party has taken on board many suggestions arising from the survey about future topics to be covered in the newsletter. It is hoped that the response to suggestions made in the survey by respondents will maintain the interest and participation of our reading audience, meet their educational needs, and continue to motivate community healthcare providers to stay involved in CME. In addition, the newsletter continues to expand both its list of contributing authors and its distribution list. Possible future directions may include inclusion of other medical (but non-infective) conditions which are important from a community Public Health perspective, or a reduced number of bulletins annually.

The development of the GOCATS newsletter has provided many leadership lessons. With regard to communication and informatics, this project has enhanced both my written health communication skills and my skills in interpreting health information. In addition, a project involving many co-workers and stakeholders improves one's ability to work with diverse partners. These types of working relationships require mutual cooperation, tolerance, patience and particularly, compromise. In regard to leadership, this project has taught me to display openness for suggestion from others, and has highlighted for me that I have strengths in inter-personal working relationships. However, ongoing, lifelong, professional development and learning is an essential in the field of Public Health.

References

1. Thacker SB, Berkelman RL, Stroup DF. The Science of public health surveillance. *J Public Health Policy* 1989; 10 (2): 187-203.
2. Stroup DF, Berlin JA, Morton SC, et al. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. *JAMA* 2000; 283 (15): 2008-12.
3. Health Professions Education: A Bridge to Quality. Workshop report, April 18, 2003. Accessed April 20, 2010 at:
<http://www.iom.edu.libproxy.lib.unc.edu/Reports/2003/Health-Professions-Education-A-Bridge-to-Quality.aspx>.
4. Redesigning Continuing Education in the Health Professions. Consensus report, December 4, 2009. Accessed April 20, 2010 at:
<http://www.iom.edu.libproxy.lib.unc.edu/Reports/2009/Redesigning-Continuing-Education-in-the-Health-Professions.aspx>. Retrieved May 10, 2010.
5. Maltais P, Goulet F, Borduas F. Educational skills and knowledge needed and problems encountered by continuing medical education providers. *J Contin Educ Health Prof* 2000; 20(2): 91-6.
6. Harris JM Jr, Novalis-Marine C, Amend RW, et al. Promoting free online CME for intimate partner violence: what works at what cost? *J Contin Educ Health Prof* 2009; 29(3):135-41.

7. Fitzgerald A, Bailey M, Smith AC, et al. Child development services: a multidisciplinary approach to professional education via videoconference. *J Telemed Telecare* 2002; 8 Suppl 3:S3:19-21.
8. Loh LC, Ong HT, Quah SH. Impact of various continuing medical education activities on clinical practice - a survey of Malaysian doctors on its perceived importance. *Ann Acad Med Singapore* 2007; 36(4): 281-4.
9. Love RR, Moorman JE. Continuing medical education with a personalized monthly newsletter. *Med Pediatr Oncol* 1984; 12 (5): 309-12.
10. Freemantle N, Harvey EL, Wolf F, et al. Printed educational materials: effects on professional practice and health care outcomes. *The Cochrane Database of Systematic Reviews* 2005; 3: 1-24. Accessed at:
<http://blog.evidenceinmotion.com/evidence/files/EducationalPrintedMaterialsFreemantleOldCochrane.pdf>. Retrieved July 25, 2010.
11. Essential public health services. Accessed at:
<http://www.cdc.gov/od/ocphp/nphsp/EssemtialPHServices.htm>.
Retrieved May 18, 2010.
12. World Health Organization, Communicable Disease Newsletter. Accessed at: http://www.searo.who.int/LinkFiles/CDS_CDS-Newsletter-Vol4issue4.pdf. Retrieved May 20, 2010.

13. Centers for Disease Control and Prevention, Morbidity and Mortality Weekly Report. Accessed at:
http://www.cdc.gov/mmwr/mmwr_ss/ss_cvol.html. Retrieved April 24, 2010.
14. New Jersey Department of Health and Senior Services, Communicable Disease Service Newsletter. Accessed at:
<http://www.state.nj.us/health/cd/newsletter.htm>. Retrieved April 24, 2010.
15. Tacoma/Pierce County Health Department, Communicable Disease Newsletters. Accessed at: <http://www.tpchd.org/page.php?id=115>. Retrieved April 24, 2010.
16. Seattle King County Health Department, Epi-Log newsletter. Accessed at:
<http://www.kingcounty.gov/healthServices/health/communicable/epilog.aspx>. Retrieved April 24, 2010.
17. Australian Government Department of Health and Ageing, Communicable Diseases Intelligence. Accessed at:
<http://www.health.gov.au/internet/main/publishing.nsf/Content/cda-cdi-aims.htm>. Retrieved April 24, 2010.
18. State Government of Victoria, Australia, Department of Health, Immunization. Accessed at:
<http://www.health.vic.gov.au/immunisation>. Retrieved April 26, 2010.

19. State Government of Victoria, Australia, Department of Health, Immunization Program Newsletter. Accessed at:
<http://www.health.vic.gov.au/immunisation/general/newsletter>.
Retrieved April 26, 2010.
20. Nekomoto T, Elpern DJ. Junk! Arch Dermatol 1995; 131(5): 530-2.
21. Horn FE, Mandryk JA, Mackson JM, et al. Measurement of changes in antihypertensive drug utilization following primary care educational interventions. Pharmacoepidemiol Drug Saf 2007; 16(3):297-308.
22. Blackstien-Hirsch P, Anderson G, Cicutto L, et al. Implementing continuing education strategies for family physicians to enhance asthma patients' quality of life. J Asthma 2000; 37(3):247-57.
23. Jennett PA, Laxdal OE, Hayton RC, et al. The effects of continuing medical education on family doctor performance in office practice: a randomized control study. Med Educ 1988; 22(2):139-45.

Appendix

1. Logic Model
2. GOCATS Pro forma
3. Example of a GOCATS Newsletter
4. GOCATS Survey

GOCATS Logic Model

INPUT	ACTIVITIES	OUTPUTS	OUTCOMES		IMPACTS
			SHORT TERM	LONG TERM	
<p>Resources and Investments</p> <ul style="list-style-type: none"> • Funding: Applying for grants 2009 • Partners: Barwon Health Pathcare GPAG • Health Topics: Construct list 12/08 • Supplies: Stationary, postage costs • Web-page design & set-up 	<ul style="list-style-type: none"> • Develop content of bulletins 6 months at a time based on current public health issues and seasonality of infections, to become a comprehensive document for GPs • Create logo • Create mock format • Promote program with a launch 2/09 at GPAG (11th Feb 2009) • Secure contributors among Barwon Health, Pathcare and potentially GPs to provide educational information • Communicate program activities and progression to all stakeholders via meetings, & newsletter itself. 	<ul style="list-style-type: none"> • Contributors recruited • Monthly bulletins with a database of images • First bulletin for 2/09 • Minimum of 10 bulletins per year • Approximately 20-30 GPs attend launch 	<ul style="list-style-type: none"> • Within 6 months, most GPs in the region will be familiar with GOCATS. • GPs will be more knowledgeable about communicable diseases • GPs will be more knowledgeable about best practices for managing various medical conditions • Within 12 months, the majority of GPs will have found GOCATS useful 	<p>An evaluation at 12-18 months via questionnaire will find that the program provided useful educational material, which was evidence-based & relevant to practice.</p> <p>At 12-18 months an evaluation will determine whether paper-based or electronic mailing is preferred</p>	<ul style="list-style-type: none"> • Reduction in unnecessary ED referrals due to adherence to best practices • Reduction in antibiotic prescribing for viral illnesses • Enhanced specimen collection for selected conditions • Improved care for patients in the community
<p>GOCATS has the following goals:</p> <ul style="list-style-type: none"> • To produce a paper-based and electronic bulletin about communicable diseases and best practices which is evidence-based in a concise format • Be reactive and proactive in our approach to education 					

GOCATS article pro-forma



Topic: Including a brief description

Clinical presentation:

Diagnosis and important differentials to consider:

Specimen collection:

Which specimens to collect- Note the costs of investigations where relevant.

(e.g. Contrast: culture vs PCR vs Serology)

How to collect the specimen-

- What tube to collect specimen in
- How specimen needs to be stored
- Type of swab and transport medium to use
- Possible sites of specimen collection

Epidemiology and Data:

Think about available databases and Pathcare.

Management:

This could include when to refer to the ED or other specialist

Appropriate dressings/treatment

Public health issues:

- Isolation of patient
- Contact tracing and Rx etc.

Pictures: Please include relevant pictures/diagrams/images for interest.

Word Count: Articles should be approx. 250-300 words in length.

Pictures: Pictures should be in a JPEG format.



Also in this issue:

- ◊ Community Acquired Pneumonia
- ◊ Community Acquired Pneumonia in children
- ◊ Swine Flu Update

Community Acquired Pneumonia cont....

Dr. Deb Friedman

The major question in the community is which patients with CAP should be referred to hospital?

Using a severity score, such as the Pneumonia Severity Index (PSI) can guide the decision about the site of treatment for adults with CAP. PSI divides patients into classes I-V according to risk of death. In class I the mortality is 0.1%, compared with 27% for class V. Points are assigned in the PSI depending on the age of the patient (>50), if the patient resides in a nursing home, the presence of coexisting illnesses, abnormal examination findings, and abnormal laboratory and radiographic results.

A male patient 75 years of age with no underlying diseases (such as a malignancy, or liver disease), without haemodynamic instability and with oxygen saturation >90%, would have a PSI of 75, which would place him in risk class III. Patients in this category require brief observation or outpatient therapy. Patients with a PSI score >90 are in classes IV and V, and should be referred to hospital for admission.

Oral, outpatient therapy for CAP consists of amoxicillin and either doxycycline, clarithromycin or roxithromycin or use of a single agent such as moxifloxacin.

Patients over 65 years of age, or those younger than 65 with underlying medical problems should receive both the pneumococcal vaccine and an annual influenza vaccination.

References

- ◊ Admiral, J, Bolibar, I, Balanzo, X, Gonzalez, CA. Risk factors for community-acquired pneumonia in adults: A population-based case-control study. *Eur Respir J* 1999; 13:349.
- ◊ Laheij, RJF, Sturkenboom, MCJM. Risk of community-acquired pneumonia and use of gastric acid-suppressive drugs. *JAMA* 2004; 292:1955.
- ◊ Sarkar, M, Hennessy, S, Yang, YX. Proton-pump inhibitor use and the risk for community-acquired pneumonia. *Ann Intern Med* 2008; 149:391.
- ◊ Marrie, TJ, Poulin-Costello, M, Beecroft, MD, Herman-Gnjidic, Z. Etiology of community-acquired pneumonia treated in an ambulatory setting. *Respir Med* 2005; 99:60.
- ◊ Fine, MJ, Auble, TE, Yealy, DM. A prediction rule to identify low-risk patients with community-acquired pneumonia. *N Engl J Med* 1997; 336:243.
- ◊ Australian therapeutic guidelines antibiotic, version 13, 2006.



The GOCATS bulletin is a collaborative effort between the GP Association of Geelong, Pathcare and Barwon Health. The bulletin provides evidence based region-specific information about communicable diseases in the Geelong area. The bulletin will be produced on a monthly basis. Feedback and topic suggestions are welcome, please contact Natalie Virgo-Milton, GP Association of Geelong, 5229 1922 or natalie@gpageelong.com.au

Next Issue Look out for.....

- ◊ Refugee Health

Community Acquired Pneumonia in children....

Dr. Dave Fuller

Pneumonia (infection and inflammation affecting the alveoli) is a common condition in children and will usually present with tachypnoea, fever and cough. It can also present with abdominal pain (as a result of pleural irritation when the lower lobes are affected). There may be signs of respiratory distress and the presence of grunting respirations is also indicative of airspace disease. Focal chest signs may be present (crackles, bronchial breathing), but in young children these signs may be absent, or at least very difficult to find. Therefore, in young children presenting with fever, cough and tachypnoea, a CXR should be organised, even in the absence of focal chest signs.

Differential diagnosis includes asthma with a viral precipitant, or bronchiolitis in children under 12 months – the keys here are that wheeze is a sign of small airway disease rather than consolidation and the child with asthma / bronchiolitis will have signs of airway obstruction – hyper-expansion, Harrison's sulci, prolonged expiration.

Causes:

Respiratory viruses: these are the commonest cause of pneumonia in young infants in our community. Symptoms are usually (not always) milder and there may be scattered crepitations on auscultation.

Mycoplasma: is the commonest cause of pneumonia in children over 5 years. Symptoms are often systemic and develop over several days before the cough. Cough is prominent and crackles can be focal or widespread.

Bacteria: *S. pneumoniae* is the commonest bacterial pathogen in all age groups, with non-typable *Haemophilus spp* and *S.aureus* being less common.

Signs of focal consolidation may be present (not always in younger children).

Investigation

CXR should generally be performed to confirm or exclude pneumonia.

Neutrophilia and raised inflammatory markers will suggest a bacterial cause, but in most children who don't need admission to hospital because of their respiratory state, a decision about treatment can be based on clinical signs and CXR (treat focal consolidation).

Treatment:

Children over 3 months of age who are not very unwell, and don't have extensive consolidation or pleural effusion on CXR can be considered for outpatient management

- Viral – symptomatic treatment, parental education
- Mycoplasma – roxithromycin 2.5-4mg/kg (150mg) bd for 10 days
- Bacterial pneumonia – amoxicillin 20mg/kg (500mg) tds for 7 to 10 days

Who needs admission to hospital?

- Children under 3 months of age (and still strongly consider it in children under 1 with focal consolidation)
- Children who are very unwell (drowsy and lethargic, moderate to marked respiratory distress)
- Children with (likely) bacterial pneumonia not responding to oral antibiotics (also consider treating Mycoplasma)
- Children with (likely) bacterial pneumonia not tolerating oral antibiotics.

Follow up

In addition to reviews to ensure the child is improving, all children with pneumonia should be reviewed 6 weeks after their illness. If there are persistent symptoms or signs, CXR should be performed, but not routinely if everything has resolved clinically.

References:

- ◊ Royal Children's Hospital Clinical Practice Guideline – see http://www.rch.org.au/clinicalguide/cpg.cfm?doc_id=5238
- ◊ Royal Children's Hospital Paediatric handbook, 7th edition, pp574-7

continued page 2



GOCATS is a collaborative effort between the following organisations



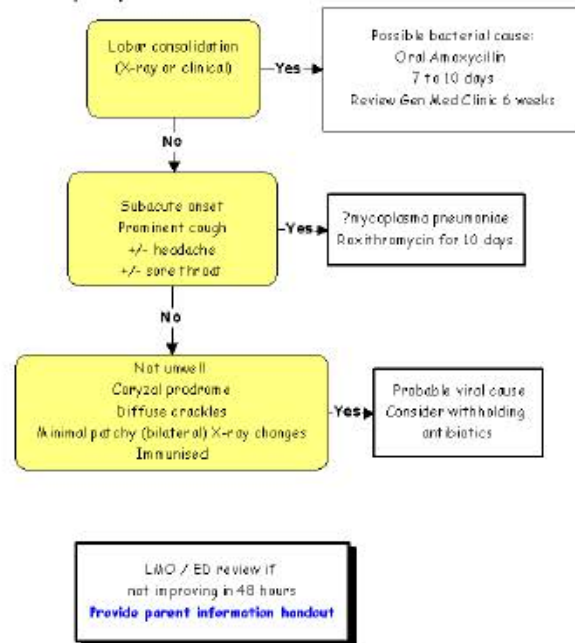
Community Acquired Pneumonia in children...cont.

from page 1

From RCH clinical practice guideline:

OUTPATIENT MANAGEMENT OF PNEUMONIA

Previously well patient > 1 month old



Community Acquired Pneumonia

Dr. Deb Friedman

Community-acquired pneumonia (CAP) is a common illness associated with considerable morbidity and mortality, particularly in elderly patients and those with significant co-morbidities.

Patient factors which predispose to community-acquired pneumonia include; being elderly, smoking, alcohol consumption, pulmonary oedema, immunosuppression, chronic pulmonary diseases, and recent commencement of gastric acid-suppressive therapy (including proton pump inhibitors).

The microbiologic cause of CAP is only identified in about 20% of cases in usual medical practice, and for outpatients with CAP, diagnostic tests are not routine. Bacteria are the most common cause of CAP, and *Streptococcus pneumoniae* is the most common cause of pneumonia worldwide. However, the most common pathogens depend on patient factors, epidemiology and the severity of pneumonia.

For ambulatory outpatients, the commonest causes of CAP are *Mycoplasma pneumoniae*, respiratory viruses (influenza, respiratory syncytial virus and parainfluenza virus are the most common), *Chlamydia pneumoniae* (previously known as *Chlamydia pneumoniae*), *S.pneumoniae* & *Haemophilus influenzae*. However, among those with severe CAP, *legionella spp.*, Gram-negative bacteria, and *Staphylococcus aureus* (postinfluenza pneumonia) are important causes.

Diagnoses such as tuberculosis, psittacosis, and Q fever should be considered depending on the epidemiologic setting. Immunocompromised hosts, (including those on prednisolone ≥ 20 mg daily for >1 month) are at risk for *Pneumocystis jiroveci* (PCP), which will not respond to standard antibacterial therapy. In children less than five years of age, viruses are the most common cause of pneumonia.

A chest x-ray should be performed in patients with at least 2 of: fever, rigors, new-onset cough, change in sputum colour if there is chronic cough, chest discomfort or dyspnoea.

Swine Influenza– H1N1

Dr. Deb Friedman

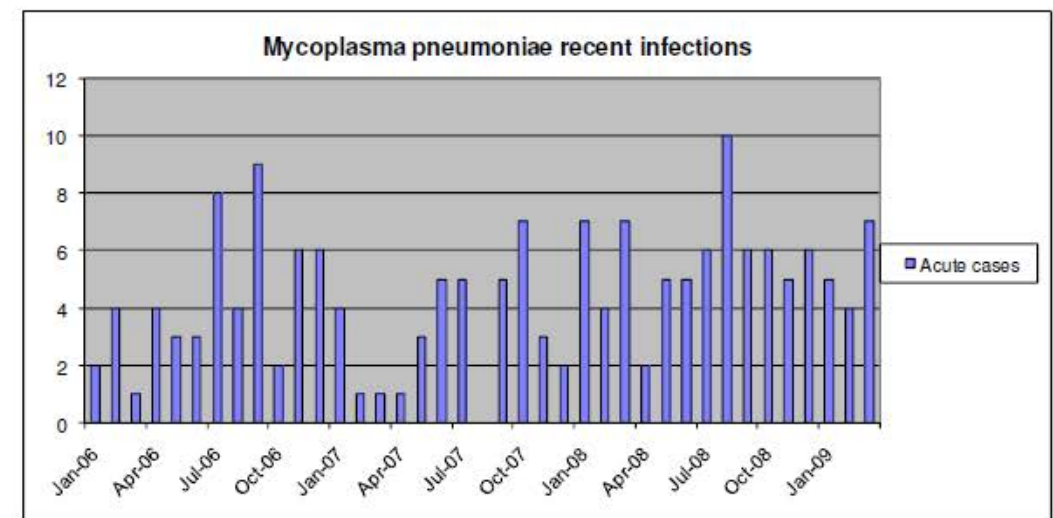
The ongoing outbreak of novel influenza A (H1N1) continues to expand internationally. As of May 10, 29 countries have reported 4379 cases of H1N1 and 49 deaths; most cases are from USA, followed by Mexico, Canada and Spain. One case has been identified in an Australian woman, however this was acquired in USA 10 days prior. Overall, based on these figures alone, the mortality rate is 1%, however, the total number of cases especially initially in Mexico is not known. Human-to-human transmission has been proven.

Personal protection (via PPE), during a pandemic remains all-important. Influenza is transmitted via respiratory droplets, and people are at risk of acquisition if within 1 metre of an infected patient, or if they have contact with potentially infected fomites in a patient's environment. Staff providing care to patients with suspected or confirmed H1N1 should perform careful hand hygiene and wear a surgical mask (known as standard and droplet Precautions). If there is a risk of splashes onto the face, for example, if taking a diagnostic swab or aspirate, or if performing intubation and resuscitation, staff should wear an N95 mask, face/eye protection with eye-visor, goggles, or a face shield and, a clean, non-sterile, long-sleeved gown and gloves. Importantly, staff must remember hand hygiene after PPE removal.

It is recommended that stable patients be assessed and investigated by their GP, while unstable patients should be sent to the Emergency Department. Good communication with the ED and DHS about patient referrals and potential cases is paramount. WHO advises no restriction of regular travel or closure of borders at this stage.

Mycoplasma pneumoniae cases in the Geelong region from 2006-2009:

Dr. Owen Harris



GOCATS Survey

Many thanks for your support of GOCATS over the last year. We would very much appreciate your assistance in completing a short survey about GOCATS which will help us to refine our newsletter. We are offering respondents to this survey a complimentary magazine holder for your GOCATS bulletins.

Thankyou

The GOCATS Team.

1. Are you aware of the GOCATS newsletter?

Yes No If No, thanks for your time, end of survey.

2. How often do you read the GOCATS newsletter?

Never Rarely Sometimes Often Always Unsure N/A (not applicable)

3. I am aware that GOCATS is available by (tick all that apply):

- a) Hard copy by post
 b) Electronic by e-mail
 c) GPAG web archives

4. What is your preferred method of receiving/accessing GOCATS?

- a) Hard copy by post
 b) Electronic by e-mail
 c) GPAG web archives

5. Please comment on the following aspects of the GOCATS newsletter:

a) Usefulness:

1 2 3 4 5 Unsure N/A
 Not at all useful Very Useful

b) Interest:

1 2 3 4 5 Unsure N/A
 Not at all Interesting Very Interesting

c) Relevance to practice:

1 2 3 4 5 Unsure N/A
 Not at all relevant Very relevant

d) Informativeness:

1 2 3 4 5 Unsure N/A
 Not at all Informative Very informative

6. With regard to the content of the GOCATS newsletter, I find it (please tick ✓ one box):

- a) Too short b) Just the right length
 c) A little long d) Much too long

7. With regard to the format of the GOCATS newsletter (text, pictures, graphs), I have the following comments:

8. Please tick ✓ your 5 favourite GOCATS topics covered in 2009, and comment why:

- | | | | | | |
|--|--------------------------|----------------------------------|--------------------------|-------------------------|--------------------------|
| Spider bites | <input type="checkbox"/> | Cat, dog and human bites | <input type="checkbox"/> | Gastroenteritis | <input type="checkbox"/> |
| Gastroenteritis in children | <input type="checkbox"/> | Gastroenteritis in the ED | <input type="checkbox"/> | Influenza vaccination | <input type="checkbox"/> |
| Pertussis | <input type="checkbox"/> | Travel in pregnancy | <input type="checkbox"/> | Ectopic pregnancy | <input type="checkbox"/> |
| UTIs in pregnancy | <input type="checkbox"/> | Refugee Health information | <input type="checkbox"/> | Strongyloidiasis | <input type="checkbox"/> |
| STI screening | <input type="checkbox"/> | Chlamydia | <input type="checkbox"/> | Gonorrhoea | <input type="checkbox"/> |
| Approach to vaginal discharge | <input type="checkbox"/> | Prepubescent vaginal problems | <input type="checkbox"/> | Bairnsdale Ulcer | <input type="checkbox"/> |
| Bronchiolitis | <input type="checkbox"/> | The Barwon Health Refugee Clinic | <input type="checkbox"/> | Meningococcal Infection | <input type="checkbox"/> |
| Varicella | <input type="checkbox"/> | Community Acquired Pneumonia | <input type="checkbox"/> | Croup | <input type="checkbox"/> |
| Community Acquired Pneumonia in children | <input type="checkbox"/> | | | | |
| Contaminated wounds- the infection perspective | <input type="checkbox"/> | | | | |
| Contaminated wounds- the surgical perspective | <input type="checkbox"/> | | | | |

9. Please tell us your least favourite topics covered in 2009, and why:

10. Do you have any suggestions for topics you would like covered in GOCATS in future issues?

11. Do you or anyone else in your practice have any other comments/suggestions for the GOCATS team?

12. Are you interested in contributing to GOCATS in the future?

Yes No

If yes, please list your name and email address:

Name: _____

E-mail: _____

Please return this survey to the GP Association of Geelong attention Natalie via the pathcare courier or fax to 5223 2209.

☺ Thankyou for taking the time to complete this survey ☺