differentiated: 13 £ MRS5 < 26, 26 £ MRS4 < 62, and 62 £ MRS(0 + 1 + 2 + 3) £91. Each wave, baseline, 1, 3, and 6 month showed similar trend in cut-offs. CONCLUSIONS: The categorization scheme developed can serve as a crosswalk between measures. However, due to the ceiling effect of the BI and M-FIM, the crosswalk could not be completed for all six distinct levels in the MRS. No apparent variation over time in the categorization scheme was observed.

OUTCOMES OF AN INTERVENTION TO IMPROVE HOSPITAL ANTIBIOTIC PRESCRIBING: INTERRUPTED TIME SERIES ANALYSIS WITH SEGMENTED REGRESSION

Ansari F1, Gray K1, Nathwani D1, Phillips G1, Ogston S1, Ramsay C2, Davey P1
1University of Dundee, Dundee, United Kingdom; 2University of Aberdeen, Aberdeen, United Kingdom

OBJECTIVES: To evaluate an intervention to reduce inappropriate use of key antibiotics. METHODS: The intervention was a policy for appropriate use of Alert Antibiotics (carbapenems, glycopeptides, amphotericin, ciprofloxacin, linezolid, piperacillin tazobactam and third generation cephalosporins) implemented through concurrent, patient specific feedback by clinical pharmacists in a tertiary university hospital. Statistical significance and effect size were calculated by segmented regression analysis of interrupted time series of drug use and cost for two years before and after the intervention started. RESULTS: Use of Alert Antibiotics increased before the intervention started but decreased steadily thereafter. The changes in slope of the time series were 0.27 Defined Daily Doses/100bed days per month (95% CI 0.19–0.34 P < 0.0001) and £1908 per month (95% CI £1238–£2578 P < 0.0001). The cost of development, dissemination and implementation of the intervention (£20,133) was well below the most conservative estimate of the reduction in cost (£133,296), which is the lower 95% CI of effect size assuming that cost would not have continued to increase without the intervention. However, if use had continued to increase, the difference between predicted and actual cost of Alert Antibiotics was £572,448 (95% CI £435,696–£709,176 P < 0.0001) over the 24 months after the intervention started. CONCLUSIONS: Segmented regression analysis of pharmacy stock data is a simple, practical and robust method for measuring the impact of interventions to change prescribing. The Alert Antibiotic monitoring programme was associated with significant decreases in total use and cost in the two years after the programme. In our hospital the value of the data far exceeded the cost of processing and analysis.

DIFFERENCES IN PATIENT BURDEN BETWEEN ENDOANAL MRI, DEFECOGRAPHY AND ANORECTAL FUNCTIONAL TESTING FOR PATIENTS WITH FAECAL INCONTINENCE

Deutek M1, Dijkgraaf MGW1, Bossuyt PM2, Terra MP2, Dobben AC, Stoker J1
Academic Medical Center, Amsterdam, Netherlands

OBJECTIVE: The work-up of patients with faecal incontinence can contain multiple tests, including endoanal MRI, defecography and anorectal functional testing. In the search of an optimal diagnostic work-up it is generally accepted that costs and effectiveness data are required. However, test differences could also be found in the amount of patient burden. The aim of this study is to evaluate the burden of tests used in the evaluation of patients with faecal incontinence. METHODS: Consenting consecutive patients underwent a standard testing protocol. Burden of testing was evaluated with a self-administered questionnaire. The main variables were anxiety, embarrassment, pain and discomfort, all measured on a 1 (low) to 5 (high) point-scale. An overall burden score was calculated by summing the scores of the four variables. In addition, patients were asked to rank the three tests from least to most inconvenient and to indicate whether they would advice the tests to friends/relatives. Statistical analysis was performed with Friedman tests. RESULTS: Data from 93 patients (14 men; mean age 60 (range 32 to 80)) were analysed. There were between test differences in terms of total burden, pain (less for MRI than with anorectal functional testing (p < 0.05)) and discomfort (lower for MRI compared to defecography (p < 0.05)), as well as embarrassment (lowest score for MRI and highest for defecography). Overall, MRI was preferred more often than defecography and functional testing, with 71% of the patients scoring MRI as least inconvenient. Patients would advice all tests to a friend/relative. CONCLUSION: This study shows significant differences in patient burden for medical tests to evaluate faecal incontinence, although this burden seems to be accepted by all participants. When evaluating medical tests for patients with incontinence, these findings can complement data on costs and effectiveness to develop the optimal strategy, minimizing total patient burden while achieving adequate diagnostic effectiveness.

A METHOD FOR IDENTIFICATION OF FRONTIER PRACTICE IN DIABETES CARE

Christensen MC1, Binder C2, Hansen JB2, Lyholm B2, Remler DK3
1Columbia University, New York, NY, USA; 2Novo Nordisk A/S, Virum, Denmark

OBJECTIVES: To develop a new method that objectively evaluates and compares provider efficiency in diabetes care.
care integrating multiple measures of both resource use and clinical outcomes. Contemporary performance assessment technology only evaluates one outcome measure at a time and does not consider resource use. METHODS: The basis for comparison is the technical efficiency with which providers transform resources into outcomes relative to peers. By identifying the highest level of performance—the efficiency frontier—the relative efficiency of each provider under evaluation is quantified. Relative efficiency is determined among diabetes care teams at Steno Diabetes Center, Denmark, over a 6-year period (1995–2000). Applied outcome measures follow recommendations of the Diabetes Quality Improvement Project and resources include clinical tests and patient care time of physicians, nurses and dieticians. Data Envelopment Analysis (DEA), a linear programming optimization technique, estimates relative efficiency, while regression analysis (RA) examines the robustness of the method. Impact of case-mix differences is examined by subgroup analysis. RESULTS: Over the study period, DEA identified a total of four teams on the frontier for clinical tests and ten teams for patient care time. Below frontier practice implied a 7% excess use of HbA1c tests, 12% blood pressure tests and 22% lipid measurements and 6% physician, 5% nurse and 13% dietician care time. Subgroup estimates implied less variation across teams and up to 30% reduction in predicted excess use of resources. When adjusting for clinical outcomes, RA identified an excess use of resources among the same teams operating below frontier in DEA. CONCLUSIONS: The method appears robust in identifying performance below frontier set by peers and a useful diagnostic tool for identifying efficiency gaps and setting targets for performance improvement in diabetes care. Identification of major subgroups in outcomes and resource use is important for practical implementation of the method.

DATA ACQUISITION AND INTEGRATION FOR ANTIBIOTIC TREATMENT REPORTING

Haase M1, Sasaki P1, Fazio J2
1Strong Square, LLC, Kirkland, WA, USA; 2Northwest Pharmacy Services, Portland, OR, USA

OBJECTIVES: Develop a database tool to allow the administration, acquisition and integration of disparate medical, pharmacy, enrollment, and provider-specific data to measure adherence to a regional antibiotic treatment guideline program. Critical, innovative data management and patient confidentiality measures were developed and implemented to build a unified data set of antibiotic prescribing episodes. METHODS: Strong Square, LLC incorporated the medical, pharmacy and professional claims from seven participating health plans in Washington state to create an integrated database of patient-specific longitudinal data. This database was used to measure the impact of previously distributed antibiotic prescribing guidelines. Recent U.S. Federal regulations (HIPAA) require non-disclosure of patient-specific data and additional reporting limitations imposed by participating health plans submitting data required that all personal-identifiers be masked. To address this, Strong Square, LLC developed a cipher application that masks all personal identifiers without hindering the ability to