HARC
Better hospitals through better research
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From the Editor's chair

What are the key drivers of overall health system performance? What interventions are effective in improving on-the-ground care? And how can we reduce the health inequalities we know exist in some patient populations? These are the three key themes explored in this issue of the *HARC e-Bulletin*.

The research and reviews highlighted in our second e-Bulletin for the year cover a broad range of topics, from emergency department overcrowding and medical device regulation, to the impact on health outcomes of hospital patient volume and guideline adherence. But they all address the key themes outlined above.

In this issue, we pay particular attention to Australia's first attempt to replicate US research on appropriateness of patient care. The CareTrack Study reported that patients received appropriate healthcare in less than 60% of cases – similar results to a large US study conducted over a decade ago.

Since our last e-Bulletin, the healthcare debate in the US has well and truly taken centre-stage. The US Supreme Court decision to uphold President Barack Obama's Affordable Care Act affirmed that all Americans will be required to buy health insurance from 2014, or pay a penalty. Pay-for-performance is a key plank of the US healthcare reforms, and a concept increasingly being examined in Australia. We report on research published in *JAMA* and the *NEJM* that questions the effectiveness of the existing pay-for-performance model.

As this issue of the e-Bulletin was being prepared, the debate about the merits of Prostate Specific Antigen (PSA) testing was in full swing. A statement released by the US Preventive Services Task Force (USPSTF) in May officially recommended against routine PSA for healthy men, regardless of age. The statement has caused considerable debate in the US, and has re-invigorated the discussion in Australia.

In our Understanding What Works section, we look at several other areas of practice where evidence can inform our thinking. Planned home birth and the impact of hospital volume on patient surgical safety are just two examples.

As always, we welcome your feedback, and our contact details can be found at the end of the e-Bulletin. Enjoy the issue.

Kellie Bisset
Editor
HARC e-Bulletin

Evaluating health system performance

Do Australians receive appropriate healthcare?

A landmark study published in the *MJA*[1] has ignited a debate about evidence-based medicine in Australia. The CareTrack study, led by Bill Runciman, Professor of Patient Safety and Healthcare Human Factors at the University of South Australia, found that patients received appropriate care in only 57% of more than 35,000 eligible healthcare encounters.

While there were "pockets of excellence" (appropriateness of coronary artery disease care was 90%), there was poor compliance in several clinical areas, such as community-acquired pneumonia, low back pain, hyperlipidaemia, and alcohol dependence.

The research team selected 22 common clinical conditions and agreed on 522 clinical indicators of appropriate care, based on existing guidelines and input from leading experts. The results were based on a patient sample of 1154.

The project was a bid to replicate a seminal US study in 1999-2000, which achieved similar results: 55% of Americans were assessed as having received appropriate care.

The Australian results have been criticised by some in primary care, who argue following guidelines is not always clinically appropriate, and lack of adherence is not necessarily a sign of poor-quality care.

But the authors said there was an urgent need for national agreement about what constitutes basic care for important conditions, to embed this information in clinical standards, and for groups of experts to ensure these standards are kept up to date.

Barriers to care

In an accompanying Perspectives piece[2] in the journal, the authors identified several barriers to measuring appropriate care, including considerable problems with existing guidelines and indicators. There were too many, they said, and they were often inaccessible or impractical in clinical settings. They were also often inconsistent and many were out of date or due for review and should be retired.

"It is surely time to do things better, as well as doing better things," the authors said. "Following this path will necessitate changing some work practices ... but the looming alternative to self-regulation – heavy-handed external regulation – should provide an incentive."

Meanwhile, on a related topic, research from the US Centers for Disease Control and Prevention (CDC) published in *JAMA*[3] has found that 48.1% of patients diagnosed with COPD reported daily use of medications.

1. Runciman WB, Hunt TD, Hannaford NA, Hibbert PD, Westbrook JI, Coiera EW et al. CareTrack: assessing the appropriateness of health care delivery in Australia. Med J Aust 2012; 197 (2)100 – 105.
2. Runciman WB, Coiera EW, Day RO, Hannaford NA, Hibbert PD, Hunt TD, Westbrook JI, Braithwaite J. Towards the delivery of appropriate health care in Australia. Med J Aust 2012; 197 (2) 78 – 81.
3. Centers for Disease Control and Prevention. JAMA 2012; 307(18): 1905 – 908.

Investing heavily in pay-for-performance schemes may be questionable

A *NEJM*[1] study has challenged a key premise underpinning the US healthcare reforms – that pay-for-performance schemes improve healthcare outcomes.

The study of more than six million patients compared 30-day mortality in 252 US hospitals participating in the Medicare Premier Hospital Quality Incentive Demonstration with 3363 control hospitals. The control hospitals were required to publicly report their performance but were not given financial incentives to do so. The patients in the study were hospitalised for either acute MI, congestive heart failure, pneumonia or to undergo a coronary artery bypass graft (CABG).

There was little difference in 30-day mortality between Premier and non-Premier hospitals at baseline, and in the rates of mortality decline per quarter. Mortality also remained similar after six years under the pay-for-performance system.

The Premier Hospital Demonstration is a six-year project run by the Centers for Medicare and Medicaid Services that has paved the way for health reforms outlined in the Obama Administration's Affordable Care Act. The Act calls for this program to be expanded nationally in 2012, however, the authors of this paper say their results are "sobering" for policymakers hoping to use pay-for-performance incentives to improve outcomes.

They said incentives for improving outcomes might be more effective if hospitals were not distracted by targets for processes of care, which are easier to achieve.

Reaching the tipping point

A Perspectives piece[2] in the same *NEJM* issue said that after initial promising results, evidence had gradually accumulated to suggest the existing pay-for-performance model was not the answer, but by then, the concept had passed the tipping point.

The authors said dismissing pay-for-performance as an ineffective thought experiment might be going too far; "A fairer statement would be that we do not have a model of a successful program, and we do not know what such a program would look like".

But "like it or not, pay-for-performance is here to stay", they said, and suggested the national adoption of the model presented an opportunity to better understand how payment incentives affected the complex behaviour within hospitals.

Penalties for safety-net hospitals?

A paper in *JAMA*[3] has examined whether hospital emergency departments treating large volumes of Medicaid or uninsured patients might be penalised under pay-for-performance incentives.

The authors hypothesized that 'safety-net' EDs might perform worse on length-of-stay targets (four hours from presentation to discharge and 8 hours to admission) and therefore be financially penalised. However, their results showed that both safety-net and non-safety-net EDs performed well on ED length-of-stay goals, with median lengths of stay falling well within targets.

But they suggested the picture was not as positive for 90th percentile results, with both groups of hospitals performing well below targets.

1. Jha AK, Joynt KE, Orav EJ, Epstein AM. The Long-Term Effect of Premier Pay for Performance on Patient Outcomes. N Engl J Med 2012; 366 (17): 1606 – 615.
2. Ryan A, Blustein J. Making the Best of Hospital Pay for Performance. N Engl J Med 2012; 366 (17):1557-59
3. Fee C, Burstin H, Maselli JH, Hsia RY. Association of Emergency Department Length of Stay With Safety-Net Status. JAMA 2012; 307 (5): 476 – 482.

The four-hour rule: answer to ED overcrowding?

Introducing the four-hour rule into WA emergency departments led to a reversal of overcrowding in three tertiary hospitals and coincided with a fall in mortality rates, an *MJA*[1] paper shows.

Authors Dr Gary Geelhoed, Director of Perth's Princess Margaret Hospital for Children, and Professor Nicholas de Klerk, Head of Biostatistics at the Telethon Institute for Child Health Research, wrote that while ED presentations increased by 10% after the introduction of the four-hour rule in Perth tertiary hospitals in 2009, overcrowding dropped by more than 30% and the overall 13% fall in mortality rate was significant. The decrease in monthly mortality rates was significant in only two of the hospitals however.

"The introduction of the 4-hour rule encouraged hospitals as a whole to share the responsibility for, and help solve the problem of, overcrowding in EDs," they wrote.

"This whole-of hospital approach appears to have led to better communication between the EDs and the wards, with an increased appreciation of each other's problems and challenges."

However, Associate Professor Drew Richardson from the Australian National University issued a note of caution[2] in response to the paper, saying that while the early evidence on the four-hour rule was encouraging, "guarded optimism" was advised.

The likelihood of inconsistent data recording across hospitals should be considered, and external factors causing the changes in mortality could not be ruled out, he argued, saying the study "should be regarded as an encouraging first report" rather than the last word on the matter.

ED presentations on the rise

Meanwhile, a research team from Monash University's Department of Epidemiology and Preventive Medicine has suggested 4-hour targets might be unachievable if ED presentations continue to climb at

current rates.

Their paper, published in the same issue of the *MJA*[3], found increasing presentations to Melbourne EDs over the past decade were higher than what might be expected from demographic changes.

Analysis of more than seven million ED presentations from 1999-00 to 2008-09 showed that the overall rise was 55%, adjusted to 32% after accounting for population changes. This represented an average annual increase of 3.6%. The volume of older people presenting to EDs doubled over the past decade and in 2008-09, almost 40% of all patients remained in the ED for four hours or more. Length-of-stay increased over the study period for more acutely unwell patients and this finding had implications for the introduction of the National Emergency Access Target, the authors said.

"The increase in LOS suggests this target may not be achievable in the current system of care and context of persisting growth in demand, particularly by older patients," they argued.

Another paper on ED outcomes published in *Health Services Research*[4], found that ED closures can have significant long-term health outcomes for patients with acute myocardial infarction who have to drive an extra 30 minutes or more to reach their local hospital. While short-term negative effects on outcomes disappear after four years for communities with a 10-minute increase in driving time, those communities with a longer commute experience a "substantial and persistent" increase in long-term mortality rates, the paper showed.

1. Geelhhoed GC, de Klerk NH. Emergency department overcrowding, mortality and the 4-hour rule in Western Australia. Med J Aust 2012; 196 (2): 122 – 126.
2. Richardson D. Emergency department targets: a watershed for outcomes research? Med J Aust 2012; 196 (2): 126 – 127.
3. Lowthian JCurtis AJ, Jolley DJ, Stoelwinder JU, McNeill JJ, Cameron PA. Demand at the emergency department front door: 10-year trends in presentations. Med J Aust 2012; 196 (2) 128 -132.
4. Shen Y, Hsia RY. Does Decreased Access to Emergency Departments Affect Patient Outcomes? Analysis of Acute Myocardial Infarction Population 1996–2005. Health Serv Res 2012; 47 (1.1): 188 – 210.

Time to up the ante on medical device regulation?

Data on medical devices in the Australian public domain is patchy and conflicting, say researchers from The University of Sydney's Sydney school of public health.

Writing in the *MJA*[1], they called for greater transparency in a bid to maintain public confidence in the national regulatory system.

Their retrospective analysis of data made public on the Therapeutic Goods Administration (TGA) website between January 2000 and December 2011 found that 6812 incidents involving medical devices were reported and these reports became more frequent over time.

There were 295 deaths and 2357 serious injuries related to the reported incidents. But most incidents (47.5%) were not investigated or, after investigation, no further action was taken in 25% of cases. Only 3.3% of reports resulted in a device recall or hazard alert, and 2.5% of reports resulted in a safety alert being issued.

"It is unclear why reports of medical device incidents are consistently increasing while device recalls are not," the researchers said.

"Because of the lack of up-to-date data, we were unable to determine whether the rise in the number of reported incidents involving medical devices was a random variation or the beginning of an increasing trend."

While several reports have been released in recent times about reforming the TGA and its processes, none of them – or the TGA's proposed reforms – addressed the issues named in the paper, "namely, missing and conflicting data, the increasing proportion of un-investigated reports and a lack of information about the type of medical devices being recalled".

The researchers did acknowledge however, that the recently released TGA reform blueprint contained some constructive proposals, particularly in relation to increasing general transparency.

Surveillance failures

Similar concerns have been raised in the US in relation to the post marketing surveillance of medical devices. In a *NEJM* perspectives piece[2], Dr Robert G. Hauser from the Minneapolis Heart Institute Foundation criticises the absence of a US surveillance system that can detect low-frequency failures in devices such as implantable cardioverter defibrillator (ICD) leads.

He said despite multiple recalls and some tragic adverse events, authorities were still guessing when it came to what advice to give patients following recalled devices. He cited a recent example of a class I recall of an ICD lead implanted in about 79,000 US patients.

"Why are we placing patients at risk when the tools and technology are available to monitor vital medical devices such as ICDs, heart valves and coronary stents?" Dr Hauser said.

"The goal is a post marketing surveillance system that not only detects device problems early but also accumulates the data needed to guide patient care."

Writing in the same issue[3] of the journal, Boston researchers said a way forward was automated prospective surveillance of high-risk implantable devices using database monitoring tools.

They said there were important opportunities to leverage large, disease-specific clinical registries for monitoring device safety. The Food and Drug Administration (FDA) and the Centers for Medicare and Medicaid Services should require detailed information on the use of high-risk devices – and clinical outcomes – to be submitted to selected national registries operated by independent academic or professional medical organisations, they argued.

1. McGee RG, Webster AC, Rogerson TE, Craig J. Medical device regulation in Australia: safe and effective? Med J Aust 2012; 196 (4): 256 – 260.
2. Haiser RG. Here We Go Again – Another Failure of Postmarketing Device Surveillance. N Engl J Med 2012; 366 (10): 873 – 875.
3. Resnic FS, Normand ST. Postmarketing Surveillance of Medical Devices – Filling in the Gaps. N Engl J Med 2012; 366 (10): 875 – 877.

Understanding what works: a look at the evidence

Surgery patients in high-volume hospitals have better safety outcomes, study finds

Hospitals performing higher volumes of high-risk surgical procedures have lower rates of adverse events, according to a paper published in *Health Services Research*. While previous evidence had shown high-volume hospitals to have lower operative mortality and morbidity, little was known about the relationship between volume and adverse events, the authors said.

Using data from the Nationwide Inpatient Sample – the largest publicly available all-payer inpatient database in the US, they examined patient safety indicators for abdominal aortic aneurysm (AAA), coronary artery bypass graft (CABG) and Roux-en-Y gastric bypass (RNYGB) procedures.

The importance of volume on absolute differences of having any adverse event varied according to the type of procedure. In RNYGB patients, low-volume hospitals had more patients with adverse events than high-volume hospitals (6.1% versus 2.1%), in AAA patients the difference was 8.8% compared with 7.2% and in CABG patients the difference was less pronounced but still present (4.4% versus 4.1%).

"The current study provides the first evidence for the relationship between quality indicators and hospital volume," the authors said. They said the dataset was large and generalizable, had broad public policy implications and warranted further investigation into the causality of these relationships.

Hernandez-Boussard T, Downey JR, McDonald K, Morton JM. Relationship between Patient Safety and Hospital Surgical Volume. Health Serv Res 2012; 47 (2): 756-59.

Research links hospital spending intensity with lower mortality, readmissions

Canadian researchers have tackled the tricky issue of whether spending more on healthcare delivers better results in a paper published in *JAMA*.

Their longitudinal cohort study examined data from more than 380,000 people over a 10-year period. It found higher spending intensity was associated with better survival, lower readmission rates and better quality of care for seriously ill patients. Higher-spending hospitals were higher-volume teaching or community hospitals with more specialist attending physicians, specialised programs and services.

The authors said their findings did not imply spending was causally related to better outcomes, or that giving lower spending hospitals more funds would improve their outcomes. Rather, it was more about the context of that spending, they said.

"Higher spending hospitals differed in many ways, such as greater use of evidence-based care, skilled nursing and critical care staff, more intensive inpatient specialist services, and high technology, all of which are more expensive."

Canada has fewer specialist resources and only selective access to medical technology compared to the US and spends 57% less per capita on healthcare. But it was possible Canadian hospitals were using their resources more efficiently, the authors said.

Stukel T, Fisher ES, Alter DA, Guttmann A, Ko DT et al. Association of Hospital Spending Intensity With Mortality and Readmission Rates in Ontario Hospitals. JAMA 2012; 307 (10): 1037-45.

Mental health guidelines associated with suicide rate drop

Mental health services in England and Wales experienced drops in their suicide rates after they rolled out recommendations from a national suicide inquiry, according to a study published in *The Lancet*.

The cross-sectional, before-and-after analysis of national suicide data in England and Wales between 1997 and 2006 showed that implementing recommendations from the National Confidential Inquiry into Suicide and Homicide by People with Mental Illness was associated with lower suicide rates. Providing 24-hour crisis care was the recommendation associated with the biggest drop, and local policies on patients with dual diagnosis and multidisciplinary review after suicide were also linked with falling rates.

Services that did not implement the recommendations had little reduction in suicide, and the biggest falls seemed to be in services in the most socioeconomically deprived areas. After 2004, services that adopted more of the recommendations had greater suicide rate reductions than those that adopted fewer, the study showed. Those services with a greater volume of patients also had more positive outcomes.

"We believe our findings have implications for mental health services internationally, particularly those in the USA, Europe and Australasia, which have also had an increased emphasis on community compared with inpatient treatment," the authors wrote.

While D, Bickley H, Roscoe A, Windfuhr K, Rahman S et al. Implementation of mental health service recommendations in England and Wales and suicide rates, 1997 – 2006: a cross-sectional and before-and-after observational study. The Lancet 2012; 379 (9820): 1005 – 12.

Study says planned home birth is cost effective and safe in multiparous women

The debate around the merits of home birth versus labour in midwifery or hospital obstetric units continues to attract strongly held positions. But according to UK researchers, there has been a lack of robust evidence on the cost effectiveness of planned births in various settings and no clear conclusions about perinatal outcomes.

In a bid to address this evidence gap, they collected data for nearly 65,000 women at low risk of birth complications from every NHS trust in England that provides home birth services, every free-standing midwifery unit, every midwifery unit co-located with an obstetric unit, and a random sample of obstetric units.

Their paper, published in the *BMJ*, found that planned home birth was the most cost effective option for low-risk, multiparous women and presented no significant effect on adverse perinatal outcomes. For low-risk nulliparous women, this option was still likely to be the most cost effective, but it was associated with an increase in adverse perinatal outcomes.

In terms of maternal outcomes, the researchers found there was 100% probability of home birth being the optimal setting across all thresholds of cost effectiveness. The cost of labour in various birth settings, in order of lowest to highest, was: planned home birth; free-standing midwifery units; co-located midwifery units;

and obstetric units.

The research, part of the Birthplace in England national prospective cohort study, was strengthened by the size of the cohort and high participation rates among midwifery units and trusts. However, the researchers said there had been no long-term follow-up of mothers and babies. “Follow-up over weeks or longer to monitor recovery … would shed more light on cost effectiveness,” they said.

Schroeder E, Petrou S, Patel N, Hollowell J, Puddicombe D, Redshaw M, Brocklehurst P. Cost effectiveness of alternative planned places of birth in women at low risk of complications: evidence from the Birthplace in England national prospective cohort study. BMJ 2012; 344: e2292

High-risk infants do better in hospitals recognised for nursing excellence: US report

Very low-birthweight babies treated in Recognition of Nursing Excellence (RNE) hospitals have significantly lower rates of seven-day mortality, nosocomial infection and severe intraventricular haemorrhage compared with those treated in non-RNE facilities, a *JAMA* paper reports.

This paper presents the results of a cohort study of 72,235 very low-birthweight infants (501 to 1500 g) born in US Vermont Oxford Network neonatal intensive care units. The results showed a significantly lower risk-adjusted rate of seven-day mortality, nosocomial infection and severe intraventricular haemorrhage, but not of 28-day mortality or hospital stay mortality.

The serious consequences of these morbidities were highlighted by the fact that 13.8% of infants with nosocomial infection in the sample died compared with 5.5% without infection and 36.4% of infants with severe intraventricular haemorrhage died compared with 5.9% without.

RNE hospitals are recognised as part of the Magnet Recognition Program, where organisations’ performance is evaluated in five areas, including transformational leadership; structural empowerment; and exemplary professional practice. The authors report that only 7% of US hospitals achieve this status.

“One way to increase the number of infants that receive high-quality care would be to increase the number of hospitals with RNE,” they said. “Our results suggest benefit for the VLBW infant population, but other hospitalised patients may also benefit.”

Lake E, Staiger D, Horbar J, Cheung R, Kenny M et al. Association Between Hospital Recognition for Nursing Excellence and Outcomes of Very Low-Birth-Weight Infants. JAMA 2012; 307 (16): 1709 – 716).

Helicopter transport associated with improved trauma survival rates

Helicopter trauma transport is one of the most expensive interventions in contemporary healthcare and should be rigorously evaluated to determine its effectiveness, say researchers writing in *JAMA*.

Using the US National Trauma Databank, the largest repository of trauma data in the world, they conducted a retrospective cohort study of more than 200,000 adults requiring transport to level I or II trauma centres between 2007 and 2009.

They found patients transported to level I trauma centres had a 1.5% absolute higher survival rate compared with ground transport services. Patients transported to level II trauma centres had a 1.4% survival advantage. A greater proportion of those transported to level 1 trauma centres (18.2%) were discharged to rehabilitation compared with 12.7% transported by ground services.

The researchers said their study had addressed the methodological limitations of previous studies but was limited by the databank not being a population-based sample and missing data for many variables. It was also not clear which aspects of helicopter transport were responsible for the mortality benefit and further studies were needed. The high annual cost of helicopter transport (from US $114,777 to US$4.5 million per institution) meant policy makers should consider funding a formal cost effectiveness analysis, they said.

Galvagno SM, Haut ER, Zafar SN, Millin MG, Efron DT. Association between Helicopter vs Ground Emergency Medical Services and Survival for Adults With Major Trauma. JAMA 2012; 307 (10):1602 – 610.

Addressing health inequalities

Health inequality gap widens in New Zealand

Rates of hospital admission for infectious diseases have increased disproportionately over the past 20 years among some ethnic groups and those in lower socioeconomic areas, a large epidemiological study from New Zealand shows.

The study, published in *The Lancet*, found that infectious diseases made the largest contribution to hospital admissions of any cause in New Zealand and that these admissions rose substantially between 1989 and 2008. However, Maori and Pacific peoples with lower socioeconomic status were far more likely to be admitted, with their rate doubling in the past 20 years. These ethnic groups were twice as likely as European people to be admitted for an infectious disease, with the most striking increase in ethnic inequality in children under five.

"The large increase in admissions for infectious disease ... challenges prevailing views about the waning importance of infectious diseases," the authors wrote.

"The increase in both ethnic and socioeconomic inequalities is of great concern, especially in a country that has longstanding government and health sector commitment to reducing such inequalities."

Baker MG, Telfar Barnard L, Kvalsvig A, Verrall A, Zhang J et al. Increasing incidence of serious infectious diseases and inequalities in New Zealand: a national epidemiological study. The Lancet 2012; 379 (9821): 1112 – 119.

"Action needed" on evidence gaps in violence and disability

Researchers funded by the WHO to quantify the level of violence against adults with disabilities have found large gaps in the evidence they say need to be addressed.

Writing in *The Lancet*, the researchers outlined the results of a systematic review and meta-analysis of 26 studies published over the past 20 years. They found that adults with disabilities were at higher risk of violence than non-disabled adults, and those with mental illnesses might be particularly vulnerable. Pooled prevalence of any recent violence was 24.3% in people with mental illnesses, 6.1% in those with intellectual impairments and 3.2% in those with non-specific impairments.

However, they said most studies analysed had focussed on people with mental illness and other types of disability had been neglected. Although only the top 26 studies of more than 10,000 references were chosen for analysis, study quality was moderate and there was a wide variation in the prevalence and risk of violence reported for different definitions of disability.

Understanding of the magnitude of violence against affected groups was the first step in the public health approach to violence prevention, they said. As such high-quality epidemiological research was needed to address existing gaps in the evidence.

"Lifetime exposure to violence and the proportions of individuals with disability who are directly threatened with violence or otherwise live in fear of being a victim, are likely to be substantially higher than our estimate," they said.

Hughes K, Bellis MA, Jones L, Wood S, Bates G et al. Prevalence and risk of violence against adults with disabilities: a systematic review and meta-analysis of observational studies. The Lancet 2012; 379 (9826): 1621 – 628.

Text messaging can boost flu vaccination in low-income families

Text message reminders with an educational flavour are an inexpensive way to boost influenza vaccination rates in children and adolescents from low-income, urban families, a study published in *JAMA* suggests.

The study, a randomised controlled trial of 9213 US children and adolescents (6 months to 18 years) attending four New York community-based clinics showed that families who received the text messages recorded higher vaccination rates (43.6%) by the end of the flu season compared with those in the control group (39.9%). A follow up nine to 10 months later showed the rates were still higher in the intervention

group (27.1% compared with 22.8%).

Parents of children in the intervention group received up to five immunisation registry-linked text messages providing educational information and instructions regarding the clinics. The researchers said that paediatric and adolescent vaccine coverage was traditionally low, despite this group being a significant source of flu transmission to high-risk populations. And traditional vaccine reminders have had limited effect on low-income populations.

They acknowledged that, while the overall rates remained low, very small increases in vaccination rates can lead to large numbers of protected individuals – and the 23,000 text messages sent cost only US$165. The intervention did not address other barriers to vaccination and might not be applicable in other settings, they said.

Stockwell MS, Kharbanda EO, Martinez RA, Vargas CY, Vawdrey DK, Carmago S. Effect of a Text Messaging Intervention on Influenza Vaccination in an Urban Low-Income Pediatric and Adolescent Population. JAMA 2012; 307 (16): 1702 – 708.

Longitudinal ageing study finds poor literacy skills in over-65s raise mortality risk

One third of English adults over 65 have low health literacy, according to a *BMJ* study, which found this to be associated with a higher risk of death over five years.

Nearly 8000 adults aged 52 or older participating in the second wave of the English Longitudinal Study of Ageing were asked to complete a four-question test that assessed their understanding of written instructions for taking an aspirin tablet.

Those with scores in the lowest 12.5% were more than twice as likely to die within five years as adults with no health literacy issues. Differences in age, socioeconomic status, baseline health status, and health behaviours explained less than half the increased risk.

“Even after adjusting for measures of cognitive function, low health literacy was still a significant predictor of mortality,” the authors said. They suggested that a population approach, as well as targeted interventions, might be warranted to address the issue.

“For example, rather than screening patients for health literacy, healthcare professionals could routinely employ evidence-based ‘teach-back’ communication techniques. Failure to consider patients’ health literacy, in terms of both functional skills and health related motivation, may help to explain low uptake of services, such as the NHS HealthSpace personal electronic health record.”

Bostock S, Steptoe A. Association between low functional health literacy and mortality in older adults: longitudinal cohort study. BMJ 2012; 344:e1602

Call for rethink on monitoring socioeconomic inequalities in health status

The data routinely collected in order to monitor population-level socioeconomic inequalities in health status needs a new approach, say researchers writing in *The Milbank Quarterly*.

Using a series of critical appraisal criteria they devised to assess the usefulness of these routinely collected outcomes data, the researchers selected three ‘cutting edge’ Scottish Government reports on health inequalities. They then assessed the extent to which four outcomes (low birthweight, adult mortality, cancer incidence, mental health and wellbeing) met their criteria.

They found that “reversibility and sensitivity to change” was the criterion most frequently unmet by routinely collected data analysis in the Scottish reports. This was because the data collected mostly concerned events that happened later in life such as occurrence of, and death from, chronic disease.

The researchers argued that surveillance should be moved “upstream” to use indicators that occurred earlier in life and could be changed within five to 10 years through effective programs and policies. One example would be to focus more on measuring children’s developmental health and offering high-quality programs to at-risk families, they said. They also argued that holistically surveying the population’s wellbeing with de-identified, linked public sector administrative data, and doing that monitoring by socioeconomic position, was the future.

As people lived longer and spent less time in hospital, using health outcomes based largely on mortality and hospitalisation rates would become obsolete. “The time is thus ripe to develop new health and

functional outcomes at the population level that are more rapidly responsive to feasible policy and program interventions to improve health, function and wellbeing, across the full SEP spectrum in modern society," they said.

Frank J, Haw S. Best Practice Guidelines for Monitoring Socioeconomic Inequalities in Health Status: Lessons from Scotland. Milbank Q 2011; 89 (4): 658 – 93).

Report round-up

Closing health gaps can pay big dividends

Half a million fewer Australians would have to endure chronic disease if health gaps between the most and least disadvantaged Australians were addressed, a National Centre for Social and Economic Modelling (NATSEM) report says. *The cost of inaction on the social determinants of health*, prepared for Catholic Health Australia, found that addressing these disparities would result in: 170,000 extra people entering the workforce, generating $8 billion in earnings; $4 billion in welfare support payments being saved annually; 60,000 fewer people admitted to hospital annually, saving $2.3 billion; 5.5 million fewer Medicare services used each year ($273 million saved); and 5.3 million fewer PBS scripts filled each year ($184.5 million saved).

Improving care for high-intensity chronic conditions likely to have most impact

People with COPD or congestive heart failure spent more than half a million days in a NSW hospital bed in 2009-10, representing 8% of the total number of hospital bed days in that year, a new Bureau of Health Information report has found. *Chronic disease care: Another piece of the picture*, analysed hospitalisation records for more than 70,000 adults with COPD and CHF (including 8,298 adults with both conditions) and found these patients were hospitalised almost 100,000 times and spent more than 570,000 days in hospital during 2009-10. However, hospital usage was concentrated in a very small proportion of these patients and the report said focusing on improving care to these high-intensity users would have the most impact on reducing hospitalisations.

Reducing potentially avoidable hospitalisations: the way forward

Initiatives that reduce potentially avoidable hospitalisations (PAHs) for chronic conditions share some common characteristics, according to a new policy issue review released by the Primary Health Care Research and Information Service (PHCRIS). The review, *Potentially avoidable hospitalisations in Australia: Causes for hospitalisations and primary health care interventions*, identified several promising programs to reduce PAHs in patients with COPD, diabetes and dental conditions. These interventions had several things in common: early identification of at-risk patients; care coordination and integration of services; equitable access to primary health care; a multidisciplinary care team; and medium- to long-term disease management.

The review noted that PAHs were an indicator of primary healthcare accessibility and effectiveness, and reducing them was a key component of Australian healthcare reform. However, it said reductions were not necessarily associated with improved clinical outcomes and the primary healthcare sector would need extra resources to meet patient demand if lowering PAHs led to fewer hospital admissions.

Forthcoming events

The Quantum Leap: 24–27 Sept, Sydney

Hosted by the Australian Council on Healthcare Standards, the Australian Healthcare and Hospitals Association, and Women's and Children's Healthcare Australasia, *The Quantum Leap, Measurement: redefining Health's boundaries?,* will explore the themes of leadership and vision, innovation and reform, measuring for safety and quality, and governing and identifying high performance. See the Quantum Leap

website for more information.

8th HARC Forum: 25 September, Sydney

Keynote speaker Fred Lee is the author of *If Disney ran your hospitals: 9 ½ things you would do differently*. He is a nationally recognised expert and consultant in patient relations and service excellence. More details on the HARC Forum will be sent to members soon.

1st Singapore International Public Health Conference: 1–2 Oct, Singapore

The theme of this conference is translating public health research into practice. It will bring together academics, researchers, practitioners and policy makers from around the world to share innovative solutions to address the most pressing public health challenges of the 21st century. Visit the conference website for more information.

9th Annual 45 and Up Study Collaborators' Meeting 2012: 12 Oct, Sydney

The Collaborators' Meeting provides the opportunity to receive a comprehensive update on the progress of the 45 and Up Study, hear about projects using the Study's data, connect with other researchers, policy makers and evaluators, and attend a masterclass to learn more about how to access and use data from the Study. For more information, visit the 45 and Up Study website.

1st Biennial Australian Implementation Conference: 25– 26 Oct, Melbourne

This conference, hosted by the Parenting Research Centre and the Australian Research Alliance for Children and Youth, will explore how to improve the implementation of policies and programs to more effectively deliver better health, education and wellbeing outcomes for Australia. It will feature presentations from international and Australian speakers with expertise in the development, selection, implementation and evaluation of health, educational and social policies, programs and services. For more information, visit the Implementation Conference website.

Congress Lowitja 2012: 14–15 Nov, Melbourne

The Lowitja Institute, Australia's National Institute for Aboriginal and Torres Strait Islander Health Research, incorporating the Cooperative Research Centre for Aboriginal and Torres Strait Islander Health, will host this congress, with the theme *Knowledge Exchange and Translation into Practice*. The congress will be an interactive event for end-users of health research, researchers and policy makers and will explore the emerging area of Knowledge Exchange in Aboriginal and Torres Strait Islander health research. Visit the Lowitja Institute website for more information.

Australian Association of Gerontology National Conference: 20–23 Nov, Brisbane

Ageing: Challenging the Boundaries is the theme for this conference program, which will emphasise the importance of challenging and breaking through the perceived boundaries in ageing that determine the limits of our research, policy and practice. The conference aims to connect, challenge and inspire the exchange of innovative ideas between key stakeholders on ageing. For more information visit the AAG Conference website.

Network to Network Conference 2012: 21–23 Nov, Sydney

The Agency for Clinical Innovation (ACI) and health departments across Australia and New Zealand will host *Network to Network 2012- the second Australasian Clinical Networks Conference*. The program will cover strategies used by effective networks to support implementation, evaluating the outcomes of clinical networks, community engagement, and how effective clinical networks contribute to stability during times of

national and state health reform. More information is available on the ACI website.

Australian Health and Medical Research Congress, 25–28 Nov, Adelaide

The Congress will include presentations from societies such as the Australian Society for Medical Research, the Endocrine Society of Australia, the Australian Centre for Stem Cell Research, and the Society for Reproductive Biology. For more information, visit the AH&MR Congress website.

8th Health Services and Policy Research Conference, 2–4 Dec 2013, Wellington NZ

Through this conference, the Health Services Research Association of Australia and New Zealand(HSRAANZ) aims to facilitate communication between researchers and policymakers to promote education and training in health services research and ensure sustainable capacity in health services research in Australia and New Zealand. For more information, visit the HSRAANZ conference website.

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