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Review

Primary health care-based programmes targeting potentially avoidable hospitalisations in vulnerable groups with chronic disease

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Executive summary

This report reviews outcomes of intervention programmes targeting reductions in potentially avoidable hospitalisations (PAHs) and/or avoidable Emergency Department presentations (ED presentations) among people with chronic disease. The focus is on the role of primary health care and where possible programmes targeting specific vulnerable populations, namely Indigenous Australians, rural and remote residents and those at socioeconomic disadvantage. This report also aimed to examine trends in PAHs and ED presentations among people with chronic disease.
This report examines PAH and ED presentations according to the following structure:

- Trends in PAH and ED presentation rates: describes the current trends and rates in Australia, including recent epidemiological surveys on associated risk factors
- Overview of findings from systematic reviews: examines high level systematic review evidence identifying risk factors and the evidence base for potential intervention strategies
- Programmes to reduce PAHs and ED presentations: examines the success or otherwise of 'real world' implemented programmes targeting vulnerable populations.

Policy context

Reductions in PAHs and ED presentations are important health care policy benchmarks and represent potential for improved health outcomes, efficiency and cost savings.

- PAH is a National Health care Agreement (NHA) performance indicator, relating to the outcome *Australians receive appropriate high quality and affordable primary and community health services*. The proportion of total separations that were for PAHs is an NHA benchmark (AIHW, 2015a, p 89)
- Potentially avoidable GP-type presentations to emergency departments is an NHA indicator for the outcome area of *Australians receive appropriate high quality and affordable primary and community health services*
- In 2015, the Australian government announced formation of a Primary Health Care Advisory Group (PHCAG) to examine opportunities for the reform of primary health care in improving the management of people with complex and chronic disease (Australian Government Department of Health, 2015b). Eliminating waste and improving efficiency is part of the stated long-term

strategy, and to this end achieving reductions in PAHs and ED presentations is likely to make a significant contribution.

Key findings

Trends in PAH and ED presentation rates

- In the general population, PAH rates are generally high, but stable for chronic and acute conditions, whereas they have increased for vaccine-preventable conditions
- Compared with the general Australian population, PAHs are higher in vulnerable populations (Aboriginal and Torres Strait Islander peoples, rural/remote residents, socioeconomic disadvantaged, elderly)
- ED presentations have steadily increased (beyond population growth), with the largest increases occurring in those aged 0–4 years and 20–24 years (Victorian data). ED presentations are also high in those aged 60 and over. However, increases may be related to increases in absolute number of acute presentations rather than GP-like non-urgent presentations
- Chronic diseases account for more than half of all PAHs. Chronic obstructive pulmonary disease is the most common chronic disease PAH in all states of Australia.
- Although chronic disease management programmes have been implemented Australia-wide, generally there is no statistically significant reduction in the rates of PAH and ED presentation
- Lack of consistency in the definition and use of PAHs as an indicator of primary health care access may influence findings across studies; and may not adequately determine truly avoidable events, particularly among chronically ill elderly people.

Overview of programmes to reduce PAHs and ED presentations

Systematic reviews of randomised controlled trials (RCTs), comparative cohort studies and evaluations of programmes suggest:

- Key predictors of PAHs, ED presentations and hospital readmissions include: older age, low socioeconomic status (SES), ethnicity, rurality, comorbidities, mental illness and substance use and relationship status (widowed/separated)
- Elements in successful programmes are largely context- and condition-specific as PAH rates vary according to different chronic conditions and disease severity; therefore, flexibility in approaches is needed
- Primary health care-based interventions that showed significant reductions in the rates of PAH and ED presentation included:
    - continuity of GP care, but condition-dependent (reduced rates for asthma, but not for diabetes or coronary heart disease)
    - increased GP supply, but this is likely to be more relevant in US and Canadian settings. In other settings outcomes are generally inconsistent (with the exception of asthma or hypertension where increased GP supply is associated with reduced rates of PAH and ED presentation)
    - GP management plan with team care arrangement (GPMP-TCA), particularly for patients with diabetes
    - multidisciplinary teams are likely to be important for reducing PAHs/ED presentations
    - for elderly patients, multidisciplinary teams with specialist gerontologist and integrated with social care needs reduced ED presentations
    - comprehensive, flexible vertical and horizontal integration of primary health care with hospital and community-based services

    - capacity to provide care in peoples' homes, particularly for socioeconomically disadvantaged and the elderly
    - care coordinators within a multidisciplinary team to liaise with GPs, hospital and home care services improve rates of PAH for all vulnerable populations
    - strong governance structures and clear but flexible guidelines are a common element
- Hospital-based interventions showed reduced PAHs in heart failure patients (hospital outpatient), but included intensive monitoring over a prolonged period
- For Aboriginal and Torres Strait Islander peoples, evidence is highly variable and condition-specific:
    - Remoteness is only one factor that influences rates of PAH and ED presentations, as many Indigenous peoples have multiple disadvantage, including more advanced illness, multimorbidity, low SES and poor health literacy
    - Programmes that are culturally appropriate and involve integration with other health and social service sectors are more likely to reduce rates of PAH/ED presentation
- For rural and remote-dwelling people, problems related to access and social isolation (and multiple disadvantage) may impact on rates of PAH. Successful programmes include:
    - Flexible design and implementation (e.g., on-line, telehealth services), such as HARP-BCOP and MHEC-RAP
- For low SES, cost of accessing health care, multimorbidity and low health literacy are key barriers. Factors that influence rates of PAH include:
    - Flexible, individualised approach
    - Use of nurse coordinator
    - Integration across primary health care, acute and community care (e.g., HARP-RHP, Southampton model)
- Programmes demonstrating a significant impact on rates of PAH and ED presentation across vulnerable populations include HARP, Inala-ICDM, Silver Chain Group, ACE, My Health Guardian
- Fitzroy Valley Partnership is a promising programme initiative awaiting robust evaluation.

Policy considerations

Evidence from the literature suggests that the following factors may be important to consider in developing policies related to reducing PAHs, ED presentations and hospital readmissions:

- Better validated indicators are needed. Use of PAHs as an indicator of primary health care access and health system performance may not be very reliable; and PAHs data for vulnerable groups is often lacking. Findings from an alternative indicator (APHID) are awaited
- The impact of advanced patient age on the potential of primary health care to reduce PAHs should be taken into consideration. For example, NZ does not include those aged over 75 in PAH rates
- Robust evaluation data on programmes to reduce PAHs in vulnerable populations is lacking; there is a need to incorporate routine evaluation into programme implementation
- Robust and detailed time-series data on rates of chronic PAH are lacking; this limits capacity to investigate the impact of local and national policy and programme initiatives
- All vulnerable groups would benefit from well-integrated care, involving multidisciplinary teams that include: primary health care, relevant specialists, care coordinator, and links to home care services and relevant social care needs, where required
- Culturally appropriate services for Indigenous Australians are essential, including mainstream services
- A targeted approach that is 'fit for purpose' may be needed to ensure that programmes reach those who are most in need (often also the costliest proportion of the population). For some

programmes that failed to reduce PAHs and ED presentations, many patients were not frequent users of EDs or their disease was in an advanced stage and hospital care was unavoidable. Given the differences in rates of PAH across jurisdictions and between chronic conditions, dedicated condition-specific programmes, with flexibility to tailor to patient's needs, geographical location and circumstances may be required.

Some but not all evaluated chronic disease management programmes have demonstrated statistically significant reductions in PAH and ED presentation rates; despite increasing rates of chronic disease in the population, the rates of PAH have remained relatively stable, which may reflect the contribution of more successful programmes.

For more details, see Full Report.