

The traditional care delivery system tends to be facility based and has not addressed the issue of coordinating care and the need for a patient centred service. Chronic disease management involves, to a large extent, the follow through and coordination of care processes across the lifetime of an illness. The key staff are the primary care physician and the case manager. Ideally, the case manager would be the primary care physician, but time and resources often do not allow this, and most case managers are nurses or social workers. Case management is new to Singapore and many parts of Asia. The American models confuse Asian healthcare providers because they seem to relate to managed care, which is not relevant locally. In Singapore there are now some 70 case managers, and the profession is expected to grow rapidly.

Information technology had not previously been designed to enable "cross talk" between providers. Disease management requires clinical and financial outcomes to be tracked and monitored over time and across care settings. In addition, data collection of specific clinical indicators should be collected and evaluated. A fully integrated electronic medical record system within an integrated care delivery system is the ideal, but very few providers have managed to achieve this. In the public healthcare system a network is being created to enable sharing of medical records. Each hospital has also created simple patient databases containing standard clinical indicators for patients covered by the disease management programmes.

Finally, at the health policy level, the current funding mechanism in Singapore, based on episodes of care, does not provide incentives for public healthcare providers to go that extra mile to ensure that patient care is effectively and efficiently organised and coordinated across the whole range of services. Moreover, prevention and health promotion activities in hospitals are not funded by the Ministry of Health. More resources need to be dedicated to planning, coordinating, and monitoring the care given after patients have been discharged into the community. The ministry has recently recognised this and established a separate grant for disease management programmes.

Conclusion

As healthcare policymakers and providers continue to emphasise the importance of care across the whole range of services, clinicians, case managers, and administrators must work together to improve the quality of care, reduce costs, and improve the efficiency of services. Constructing chronic disease management programmes offers doctors an opportunity to take a leading role in re-engineering health care. In the Asian context, chronic disease management programmes focusing on outcomes management, patient empowerment and self monitoring, case management, and streamlining of care processes could work well within a non-managed care environment. Case managers, in particular, are critical to the success of such programmes as they bridge the gap between hospital based and community based care and ensure continuity of care.

There is at present a paucity of evaluations of disease management programmes. Asian countries can, however, learn from the experiences of Singapore

in implementing disease management programmes, which focus on ambulatory primary care and case management rather than on expensive technology driven tools, often seen in other developed countries.

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Corrections and clarifications

Linking guideline to regular feedback to increase appropriate requests for clinical tests: blood gas analysis in intensive care

Several errors unfortunately crept into this quality improvement report by Paolo Merlani and colleagues (15 September, 620-4). They all appeared on page 623. In figure 4 the y axis should be labelled from 40 to 100 [not 3-9]. The text for the last two footnote symbols beneath the table should be reversed. An electronic glitch led to some standard deviation values in parentheses appearing as superscript numbers: in the second paragraph under the heading "Impact of the intervention" the mean (SD) values should be 20 (4), 24 (2), 22 (2). Our apologies to the authors.

Using cardiovascular risk profiles to individualise hypertensive treatment

Two minus signs were missing and a number was wrong in table 1 of this review article by Michael Pignone and Cynthia D Mulrow (12 May, pp 1164-6). The percentage change in relative risk for death associated with antihypertensive drugs should read -10 (-5 to -20).

Complexity and clinical care

One author's name was omitted from this second article in the "Complexity science" series (22 September, p 685-8). Trisha Greenhalgh, who is also a series editor, should have been named as an author.