OPENING THE DOOR ON OSTEOPOROSIS

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Osteoporosis is a preventable disease significantly impacting on many Australians (Nguyen et al 2004): 10% will have osteoporosis. 56% of Women and 33% of men over 60 years will have an osteoporotic fracture in their lifetime (Osteoporosis Australia, 2007). Mortality is high post hip fracture: 25% die within 12 months and 35% die within 3 years. 25% require full time nursing home (Osteoporosis Australia, 2007). Early treatment and diagnosis can decrease subsequent fractures by 30% to 60% (Access Economics, 2006). Literature review demonstrated the enormity of the problem, especially at John Hunter Hospital, with 6% of all minimal trauma fractures (Average 1,100 yearly) presenting at Emergency Department being referred to the osteoporosis clinic.

A fracture prevention nurse coordinator role was developed by a multidisciplinary fracture prevention team with funding from a NaMO scholarship. An electronic report from patient information management system (Pims) was developed to identify all fractures presenting to JHH. A consultative approach involving consumer specialities GP, community, health Information technology and any interested party has developed and implemented a fracture referral pathway; all minimal trauma fracture patients receive some follow-up for osteoporosis assessment and/or management. An Innovation Support Scholarship has allowed the team further development this project.

A comparative prospective study with formal evaluation of this model of care was undertaken independently on identified patients over 50 years with a minimal trauma fracture. Of 434 recruited patients, 214 were on fracture prevention pathway and 220 were not. Patient interviews, phone surveys and electronic audits were undertaken. The Clinic referrals of eligible people (excludes Nursing home patients) have increased from 6% in 2007 to 68% currently in 2011. Patients reviewed in the osteoporosis clinic had a 65% decreased risk of subsequent fracture compared to those not reviewed. Treatment rates in the clinic attendees are at 72% Vs 37% of non clinic attendees.

Re-fracture rates in clinic groups is 5.1% whereas those not attending the clinic has a re-fracture rate of 16.4%. Mean time between fracture and attending clinic has improved from 136 days in 2007 to 35 days in 2010. Early intervention must reduce re-fracture rate further. In this study of 434 patients, 43 bed days were required to treat subsequent fractures in the clinic attendee group whereas non clinic attendees requires 313 bed days. Considering the morbidity and mortality of patients post fracture, these improvements deliver better patient outcomes.
The strength of the model is that it has the ability to detect all patients who present with a minimal trauma fracture for referral and assessment of osteoporosis, thus reducing the numbers of subsequent re-fractures. This Model of Care has been implemented in 3 rural sites, as a result of this initiative, and is currently being evaluated by Dept of Health for implementation in other Local Health Networks. A multi-pronged systematic team approach has created efficiencies in detecting and management of osteoporosis with improved patient outcomes. These improved outcomes have been implemented within existing services. Passion, enthusiasm and continual self evaluation drives the team for better outcomes for the patients and to build on the project successes.

References
