

## Letter to the Editor

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### Direct access transient elastography allows reduction of waiting times for detection of methotrexate-induced hepatotoxicity in psoriasis patients

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Dear Editor,

Methotrexate is an affordable and efficacious drug used in psoriasis. However its therapeutic application is limited by organ toxicities, including hepatotoxicity. Early detection of liver toxicity ensures better patient outcome and prevents unnecessary cessation of methotrexate.

Liver biopsy is the gold standard for diagnosing liver fibrosis. METAVIR scoring system quantifies the degree of inflammation (A0-A4) and fibrosis (F0-F4) of a liver biopsy ( $\geq F2$  indicates fibrosis). This scoring system is well established among patients with chronic viral hepatitis. The Psoriasis Task Force developed the Roenigk scale for methotrexate induced hepatotoxicity, where liver fibrosis was diagnosed by a score 3a or greater.<sup>1</sup> Unfortunately, liver biopsy is an invasive and painful procedure associated with morbidity and mortality. Its accuracy is also subjected to sampling errors and intra- and interobserver variability.

Transient elastography (TE) measured by Fibroscan® uses pulse-echo ultrasonography to determine the speed of transmitted shear waves which positively correlates with the degree of liver stiffness. A Liver Stiffness Measurement (LSM) value  $\geq 7.1$  kPa represents significant fibrosis (METAVIR score  $\geq F2$ ).<sup>2</sup>

Barriers to obtaining a TE include a long wait time for a gastroenterology appointment, a separate date for the scan and a third visit with the gastroenterologist for review of results. To expedite this process, the National Skin Centre implemented a workflow for psoriasis patients on methotrexate which includes a direct access TE programme that enables dermatologists to order the TE and review the

scan results. Guided by the LSM, patients would be referred to a gastroenterologist for abnormal results.

Since the inception of this programme, from 1 September 2014 to March 2015, four patients reviewed had a mean waiting time of 9.8 days (8–13 days) from the appointment booking date to the TE scan. This is a significant reduction from an average waiting time of 69.3 days (range 62–89) among three patients studied from June to August 2014.

There have been criticisms with regards to the accuracy of TE in a subset of patients.<sup>3</sup> Hence, as part of the direct access programme, an algorithm delineates the exclusion criteria for TE and direct referral to a gastroenterologist:

- Obesity (BMI  $\geq 30$  or Thoracic perimeter  $\geq 75$  cm)
- Prior liver biopsy with Roenigk  $\geq$  grade 2
- Chronic hepatitis B or C infection
- History of significant exposure to hepatotoxic drugs
- Active implants in the chest (e.g., pacemakers, defibrillators)
- Chronic non healing ulcers or open wounds over the right side of the lower chest wall

While TE is not validated for methotrexate induced liver fibrosis due to a lack of prospective studies, it is validated in detecting early cirrhosis among chronic hepatitis C patients.<sup>4</sup> Furthermore the combination of imaging studies and serum markers can increase the sensitivity and specificity of screening tests.<sup>5</sup> While blood tests are easily accessible, scheduling of imaging scans entails long waiting times. Hence this direct access to TE programme, guided by a concise treatment algorithm, enables a seamless quality of care for the psoriasis patient on methotrexate.

Sincerely,

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## Australian university general practices: potential to reach out to vulnerable young people

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Dear Editor,

There will be some 1.9 billion youth aged 15–24 globally by 2030.<sup>1</sup> Youth can be a positive force for economic growth when they are provided with the knowledge and opportunities to thrive. However, for young people and particular those that are marginalised, health care access has been identified as a contributory factor to their vulnerability.<sup>2</sup> Barriers include lack of knowledge of health services, inconvenient opening hours, cost, waiting times, unfriendly environments and lack of doctor confidence in dealing with young people.<sup>3</sup> Best practice guidelines and proposals of alternate youth-centric models of healthcare are proposed. One group of healthcare services that has yet to be described in the literature are university associated general practices located on and close to university campuses. This group of general practices may already be providing improved access to health care for many young people and be uniquely positioned to reach out to the more

vulnerable amongst them.

As an initial step to better understand Australian university general practices we conducted a pilot study of Brisbane's Queensland University of Technology (QUT) general practice. This descriptive work included a retrospective review of 12-months of age stratified encounter data (Ethics: 1500001132).

QUT is divided between two central Brisbane campuses, Gardens Point and Kelvin Grove, and a smaller third campus in the northern Brisbane satellite city of Caboolture. QUT's general practice is spread across QUT's two Brisbane campuses. The Gardens Point site is within the university grounds. The Kelvin Grove site lies adjacent to the Kelvin Grove campus in a mixed urban use area known as the Kelvin Grove Urban Village. Both sites are open from Monday to Friday from 8:30am and appointments can be scheduled online. Closing times vary between sites, but generally one site is open till 8pm offering student-only late appointments. Medicare (public health insurance) eligible students are bulk billed and the private medical insurers of overseas students are billed directly hence there is no out-of-pocket cost to the individual student.

The 2015 QUT enrolment data shows a total number of 48,498 students enrolled. 66.9 per cent (n=32,452) of the total student enrolments were young people (15–24 years old), of whom 15–19 years old comprised 43.9 per cent (n=14,261) and 20–24 years old comprised 56.1 per cent (n=18,191). 10,298 encounters were recorded at QUT's general practice in the 12 months to June 2015. Stratified encounter data revealed the highest percentage encounters were: 20–24 year olds (36.5 per cent; n=3758), 25–29 year olds (22 per cent; n=2270), 30–34 year olds (12.2 per cent; n=1258) and 15–19 year olds (7.7 per cent; n=789).

The 44.2 per cent encounter data for QUT's general practice for young people (15–24 year olds) in the 12 months of data is striking, but perhaps unsurprising. Striking, as it is in stark comparison to the 8.2 per cent rate recorded for young people attendance in the Australian general practice survey,<sup>4</sup> but unsurprising given 66.9 per cent of QUT's enrolments are young people. The 15–19 year age group appear under-represented in encounters (7.7 per cent) considering this age group accounts for close to 30 per cent of total student enrolments. This indicates that although young people make up a large component of QUT medical centre encounters, access barriers may nonetheless exist for the younger students.

Proximity to the university, cost, extended opening hours, online appointment scheduling, youth friendly staff and built environment may presumably contribute to improved access. No specific evaluation of access by marginalised young people was sought in this preliminary descriptive work but some exciting possibilities are signposted for further enquiry. Qualitative data collected from young people who attend and do not attend the university general practice will help identify facilitators and barriers to young people accessing this form of healthcare service. The use of audit tools specific for marginalised populations would provide further evidence of the potential of university general practices to reach vulnerable young people.

In conclusion, this pilot work provides for the first-time an Australian evidence for the proposition that university health services are well-positioned to improve adolescent health by virtue of its physical location, opening hours, cost, youth-centric staff and youth-friendly built environment. Clarifying access and health needs could inform service delivery and health promotion activities within individual practices, and foster cross-sector collaboration.

Yours faithfully,

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