

Legal Aspects of Virtual Fracture Clinics

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There is wide interest in the redesign of orthopaedic trauma outpatient services and the adoption of a “virtual fracture clinic” model. The evidence base for the clinical safety and cost-effectiveness of the model continues to grow. This article discusses the medico-legal aspects related to redesign of outpatient fracture clinic services.

medical staff to deal with the large number of patients. The present system of managing these injuries arose from poor and uncoordinated fracture management in the early 20th century¹. With improved primary emergency care, along with the understanding of the nature and natural history of minor trauma, this ongoing utilisation of resources is of questionable efficiency and efficacy. Although the system provides clinic attendees with “face to face” encounters, due to the large number of patients this will often be with a doctor in training, or may be out with the specialist training of the consultant in charge of that clinic. Complex cases that would benefit from specialist senior assessment may have suboptimal care due to this unfocused system. At the same time there may be needless review of minor injuries that would resolve satisfactorily with no further medical input.

The Virtual Fracture Clinic

As knowledge of the natural history and management of orthopaedic injuries has improved, it has become apparent that many have been unnecessarily medicalised, which leads to over-investigation and unnecessary follow-up. This can result in prolonged treatment in plaster casts, further x-rays and attendance at repeat appointments²⁻⁸. In response to these deficiencies, the Virtual

When a person sustains orthopaedic trauma they usually undergo initial management in an Emergency Department (ED) or a Minor Injuries Unit (MIU). In most cases they are discharged home following treatment such as splintage and analgesia. The nature of the injury and treatment is explained. They are usually also given an appointment to return to an Orthopaedic Fracture Clinic in the next few days. A patient is discharged from fracture clinic follow-up when the injury is healing and they are regaining function.

Fracture clinics are often busy and rely on the presence of junior



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∞ SEVERAL TYPES OF INJURY WERE IDENTIFIED THAT COULD BE COMPLETELY MANAGED BY THE EMERGENCY DEPARTMENT OR MINOR INJURIES UNIT WITHOUT ONWARD REFERRAL. THESE INJURIES INCLUDED OCCULT AND UNDISPLACED RADIAL HEAD AND NECK FRACTURES, Mallet Finger Injuries, Fifth Metacarpal and Metatarsal Fractures. ∞

Fracture Clinic (VFC) system was introduced at Glasgow Royal Infirmary in 2011. The aim was to improve the clinical effectiveness and the patients' experience by standardising treatment pathways. This system has spread in a sustainable fashion, based on evidence that we have published in peer-reviewed literature analyses of its safety and patient satisfaction.

Several types of injury were identified that could be completely managed by the emergency department or minor injuries unit without onward referral. These injuries included occult and undisplaced radial head and neck fractures⁹, mallet finger injuries¹⁰, fifth metacarpal and metatarsal fractures². Simple, patient-removable, splintage was provided to relieve pain. Return to everyday activities was advised as early as comfort allowed. Standardised information was provided verbally and via patient information leaflets. A telephone hotline was provided so that if the patient experienced any problems or had any subsequent problems, they could obtain direct, high quality, advice. This process relied on the existing skills of the ED and MIU to diagnose and manage these conditions. All other injuries were referred for review at the following day's VFC. This runs seven days a week. It consists of consultant review of radiographs and information documented in the ED records. It is conducted in a similar

manner to any other multidisciplinary team (MDT) meeting. A provisional management plan is formulated during the meeting and the patient is contacted afterwards by telephone by a nurse who discusses this plan. Several management options are available: discharged with advice but no further physical review, or review in a sub-specialty clinic at the optimal time point for the particular injury. If there are problems with communication, diagnostic or treatment uncertainty, or strong patient preference, physical review is offered. Physical review is also offered for more complex injuries, or injuries where different treatment options are available. In these cases patients are invited for a more detailed discussion in a traditional clinic setting. The results of the VFC discussion and subsequent communication with the patient is recorded via an electronic pro forma in our electronic patient record (EPR; Bluespир International, Worcester, UK).

Concerns about the VFC pathway are occasionally voiced by clinicians and include worry that there may be an increase in delayed, missed and erroneous diagnoses, inadequate treatment, and medico-legal claims. Since the introduction in our unit in 2011 there have been no complaints or medico-legal actions arising from diagnosis or management in the virtual clinic. During this period the VFC has

managed approximately 7,000 to 8,000 patients per year.

Medico-legal principles applied to the VFC

Facilitation of good quality treatment, consented to by the patient, is a prerequisite for any acceptable model of healthcare. The primary purpose of such a model must be to secure the well-being of the patient. Where systemic or casual departures from acceptable care occur, and the patient has sustained harm, legal claims may result. The VFC pathway should therefore seek to minimise both the risk of unnecessary injury to the individual patient and the risk to healthcare providers of litigation: the two being complementary aims.

Care in a modern UK hospital is delivered by individual practitioners (including doctors) working in a multidisciplinary manner in complex health systems. Protocols and guidelines are increasingly used with a view to providing consistent and evidence-based care. However, the source and status of protocols and guidance may vary. For example, General Medical Council guidance may be advisory or mandatory. Guidelines issued by bodies such as SIGN, NICE, the Royal Colleges and specialist associations may require local adoption and implementation in Unit protocols. The evidence

basis of guidelines, and of individual recommendations within guidelines, may differ: in some instances guidance may, in the absence of a reliable evidence base, rest only upon the consensus of current guideline committee members.

Professional Negligence

The foundation of the modern law of medical negligence is in Scotland the case of *Hunter v Hanley*¹¹ and in England *Bolam v Friern Hospital Management Committee*¹²: the cases being of similar effect. A practitioner is negligent if he or she acts in a manner which no equivalent practitioner of ordinary skill would if exercising reasonable care. Where the practitioner acts in accordance with a standard practice, or with a practice that a responsible body of relevant professional opinion supports, then this will normally be sufficient to discharge the duty of care - unless the practice is not applicable to the circumstances of the patient, or the practice can be shown to be irrational, unreasonable or illogical¹³. In applying the test, recognition needs to be given to the type/grade of the practitioner alleged to have been negligent: in practice a higher standard of knowledge and skill, and thus of care, may be required, for example, of a doctor than of a nurse, and of a consultant than of a junior doctor. The application of the "Bolam

test” has been removed from the issue of informed consent after the Montgomery ruling in the Supreme Court in 2015 and may still be removed from other aspects of treatment if the lawyers have their way¹⁴.

What considerations require underpinning an acceptable professional practice in the management of fractures? The General Medical Council provides general professional guidance relating to the primary interaction between doctors and patients in its “Good Medical Practice” guideline¹⁵: particularly 15a/b, 16b, 19, 22a, 32 and 45 (see online version).

The British Orthopaedic Association is the professional body for orthopaedic surgeons in the United Kingdom. It publishes Standards for Trauma (BOAST) to give national professional guidance. It issued BOAST 7 in August 2013, covering Fracture Clinic Services¹⁶. There has been little research performed on the provision of outpatient fracture clinic services and BOAST 7 includes the statement, “this guideline is based upon professional consensus as there are very few scientific studies in the area”. It states that, “following acute traumatic orthopaedic injury, patients should be seen in a new fracture clinic within 72 hours of presentation with the injury. This includes referrals from emergency departments, minor injury units and general practice”. The guideline also recommends

that “all new fracture clinic appointments must lead to a management plan, including any clinical interventions, which is communicated to both the general practitioner and patient in writing”, and that, “there must be a system in place that allows patients rapid access back to the fracture clinic if they have problems related to their initial presenting injury”.

The BOAST guideline also states that “there should be local referral guidelines for fracture clinics and any re-design that deviates from these recommendations should be prospectively evaluated to support the change of practice” [Para 13].

Consent

Informed consent is required for any episode of medical investigation and treatment (whether conservative or active). The General Medical Council produced their current guidance on consent, Consent: patients and doctors making decisions together in 2008¹⁷: Paragraph 2 sets out an over-riding duty or principle that requires to be complied with (“you must”). Further paragraphs (2, 5, 7 and 46 - see online version) set out how the over-riding duty should be implemented (“you should”).

The information that requires to be provided to a patient in order to secure their valid consent was clarified by the Supreme Court in

the recent case of Montgomery v Lanarkshire Health Board and merits detailed consideration¹⁸. Paragraphs 87-91 are particularly relevant (see online version).

Achieving High Quality and Consent in the VFC

The VFC pathway allows us to comply with the standards set out in BOAST 7¹⁵. Locally agreed protocols, that are regularly reviewed, govern which injuries can be directly discharged and which need referred to the VFC for further consideration.

Information leaflets ensure that patients receive locally agreed information about their injury, recommended treatment, and anticipated recovery. There are no standards as yet recommending the level of information to be provided by such leaflets. We aimed to provide a readable document that focused on what the patient should expect and who to contact if there were any problems. Patients have reported satisfaction with the information provided. In the future, we anticipate the provision of nationally agreed advice leaflets supported by national specialty and sub-specialty organisations.

All radiographs are also reviewed by a radiologist, or reporting radiographer, within

24 hours and discrepancies are rapidly investigated. The actual treatment (analgesia and splintage) provided through the virtual clinic system is identical to that which would be provided in a traditional system. The telephone discussion with the patient is similar to that which would occur face-to-face. The nature of the injury is explained and the treatment option outlined. The patient can ask questions. Where no further face-to-face review is recommended there must be certainty as to the expected outcome. The patient must also fully understand when and whom to contact when the outcome fails to match expectations. Patients are given hospital contact details for use if they have any problems, or if questions arise in the future.

Our VFC is also attended by a nurse from the fracture liaison service to identify patients at risk of osteoporosis and offer them targeted investigation and management. This assists with compliance with a separate standard for trauma (BOAST 9)¹⁹.

A provisional management plan is decided during the VFC, and then discussed with the patient by telephone by the nurse. Where there is insufficient information to formulate a satisfactory management plan, either because of lack of information from the ED, or

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∞ *THE DECISIONS OF THE VFC, AND THE FOLLOW-UP TELEPHONE DISCUSSIONS ARE RECORDED CONTEMPORANEOUSLY IN OUR ELECTRONIC PATIENT RECORD (EPR) WHICH GENERATES A LETTER TO THE PATIENT, THAT IS COPIED TO THE GENERAL PRACTITIONER.* ∞

suitable radiographs, a physical review is arranged. If there are communication difficulties (for example, if the nurse making the telephone call is unsure that the patient fully understands the information they have been given), again, further review is arranged. When different treatment options are available and feasible, decision making can be complex. These patients are therefore offered face-to-face review in a sub-specialist clinic. When face-to-face review is necessary the VFC process ensures that it is with the most appropriate specialist to provide all the information that is required for the patient to make an informed decision. Finally, if at any point from the phone-call, up to six months following the injury, the patient requests physical review, this is arranged at an appropriate time point depending on the problem encountered.

The decisions of the VFC, and the follow-up telephone discussions are recorded contemporaneously in our electronic patient record (EPR) which generates a letter to the patient, that is copied to the general practitioner. The use of an EPR allows regular audit, and we have examined the clinical effectiveness, safety and satisfaction with this process^{2,9,10,20}.

We have introduced a special pathway within the virtual fracture clinic system to manage the “suspected scaphoid

fracture”. Traditional management of the “suspected scaphoid fracture” results in a large number of attendances in traditional fracture clinics. This is usually for re-examination and repeat x-rays at two weeks. There is concern that a missed scaphoid fracture will result in non-union and long term wrist dysfunction. Although the “missed” scaphoid fracture is perceived as an area of significant litigation, the prevalence of claims is in fact low. A recent paper considered the burden of legal action in the area of wrist and scaphoid injuries²¹. The authors used a Freedom of Information (FOI) request to obtain data over a seventeen year period from the NHS Litigation Authority (NHSLA) covering litigation in the English NHS, and classified the type of claim. There were 73 claims relating to scaphoid fractures that were “settled lost”, and 170 relating to the distal radius. The reported incidence of actual scaphoid fractures in the UK is 29 per 100,000²². In the same population, the prevalence of true fracture in the overall “suspected” fracture group is 16%²³. Assuming a population of England of 53.01 million (2011 Census Data), the expected number of actual scaphoid fractures in this time period was 15,373. Therefore the proportion of all suspected scaphoid fracture cases “settled lost” was approximately 0.07%.

In a similar way, the incidence of distal radius fractures is estimated at 195 per 100,000²⁴, and the number of “settled lost”

cases was 170²¹. The proportion of “settled lost” cases to total injuries was therefore 0.16%. In our service, a patient suffering wrist pain following an injury, and having examination findings consistent with an occult scaphoid fracture, has cross-sectional imaging (MRI) arranged directly by the ED. The VFC staff monitor for the results. When results are available, the patient is contacted: where there is no injury, they can mobilise without delay, and if there is a fracture, they can return to clinic for a specialist review. This protocol accelerates access to definitive diagnosis and treatment. We believe that the use of the VFC as a hub for the investigation and management of these injuries reduces variation and the risk of misdiagnosis and management.

Conclusions

VFCs have the potential to improve the safety of management through the use of standardised protocols, consultant-led management and release of time to devote to the management of complex patients. VFCs also have the potential to improve the coordination of management of injuries at higher medico-legal risk, such as the suspected scaphoid fracture.

When setting up a VFC, adequate attention should be paid to the protocols introduced, information provided in verbal and written formats, recording of discussion and decisions, and application

of the principles of good patient care and consent. Professional negligence claims can be avoided by the use of robust, up-to-date protocols that are based on national standards. Following the Montgomery ruling it is clear that where valid treatment choices exist, a clinician should provide the risks and benefits of each option that that patient would reasonably want to be informed of when making that choice. ■

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David Stephenson QC is an Advocate (Barrister) and has acted for NHS bodies and medical defence unions for more than twenty years and has extensive experience of clinical malpractice actions.

References

The full length article with references can be found online at www.boa.ac.uk/publications/JTO or by scanning the QR Code.

