Milk, feathers, wool, caviar, furs, leather, eggs, honey and, yes, horse urine are collected for our benefit, with some effects on the species providing them. Let us stop singling out one species because we are doing the same thing to many others, and in greater numbers. Think about this the next time you get cosy on your sheepskin, under an eiderdown duvet.

Louis Burgener, MD
Bulle, Switzerland

Reference

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Transfusion medicine in another era

Your recent article on autologous transfusion[1] brought back memories. In 1944 I commanded the No. 4 Canadian Field Transfusion Unit, 1 of 7 such Canadian army units in Italy and Northwest Europe. We were probably the smallest units in the army because there were only 4 of us in them — a medical officer and 3 support personnel; we travelled in a 3-ton truck with a refrigerator. The idea was stolen from Dr. Norman Bethune, who had used it during the Spanish Civil War, but it was popularized by the British in North Africa earlier in World War II.

In the field we were "married" to 2 or 3 of the field surgical units attached to casualty clearing stations or field dressing stations. We formed an advanced surgical unit that operated as close to the action as possible.

All the blood we used was donated at the Base Transfusion Unit in Bristol, England. We used only type O blood — the rest was converted into plasma. In the field, no woman or man was typed. (Wounded women were rare; the RH factor was not widely known at the time.) We used blood that was up to 10 days old, and only liquid plasma. Fortunately, HIV was unknown, and other viral infections were uncommon in our donors.

Because we had air superiority, the blood was delivered the same as milk on a milk-run: the forward surgical units would place an order 1 day and the blood would usually appear the next. By war's end we had transfused more than 1300 priority-one cases.

T.S. Wilson, MD
Westerose, Alta.

Reference

1. Graham ID, Fergusson D, Dokainish H, Biggs J, McAuley L, Laupacis A. Autologous versus allogenic transfusion: patients' perceptions and experiences. *CMAJ* 1999;160(7):989-95.

Bone densitometry: Does the emperor have clothes?

In an editorial on osteoporosis and bone densitometry[1] Brian C. Lentle claims that our reason for not endorsing selective testing of well women with risk factors was inadequate cost-effectiveness. The full text of the report[2] (available electronically at www.chspr.ubc.ca) reveals that at no point did we make such a claim. Rather, we concluded that bone mineral density testing "mislabels" most women. Furthermore, we made the point that selectively testing high-risk women involves the same caveats as screening the whole population. A precise definition of the at-risk population — necessary before selective testing can be deemed effective — does not emerge from the available evidence.

Lentle also states that the report of the British Columbia Office of Health Technology Assessment (BCOHTA) "dismissed the cost of fractures other than those involving the hip because the methodology used in arriving at the cost of non-hip fractures has been questioned." There are a number of inaccuracies in this statement. First, non-hip fractures were not overlooked in the BCOHTA report. Evidence from epidemiology cohort studies reporting the relative risk for fractures for every 1 standard deviation decrease in bone mineral density for *all measurement and fracture sites* was presented. None of the relative risk values cited in the literature exceeded those used to estimate the bone mineral density test parameters based on hip fractures. Therefore, the predictive values associated with the use of bone mineral density testing technologies to predict non-hip fractures and all fractures would be even lower.

On the basis of a study by Ray and associates[3] Lentle contends that 36.9% of the direct costs associated with osteoporosis relate to fractures other than the hip. However, the cited study is based on "osteoporosis attribution probabilities" obtained from a panel of clinicians who were asked to assess the contribution of osteoporosis to fractures at various sites. As expert opinion, it is a weak form of evidence. For example, although the panel attributed 90% to 95% of the hip fractures in women 65 years old and older to osteoporosis as defined by low bone mineral density, De Laet and colleagues[4] have demonstrated that the primary risk factor is age: "the risk of hip fracture increased 13-fold from age 60 to 80; decrease in bone mineral density [was associated with a relative risk of 1.9, controlling for age] (95% confidence interval 1.5 to 2.4) in women and 1.6 (1.3 to 1.8) in men" [p. 221].

We are somewhat surprised that Lentle continues to insist that bone mineral density measurements influence women's decisions about hormone therapy, on the basis of the article by Alexandra Papaioannou and colleagues in the same issue.[5] If anything, bone mineral density results appear to influence decisions *not* to undergo treatment: Papaioannou and colleagues report that bone mineral density measurement made no statistically significant difference in the proportion of women who opted for hormone therapy, and at 1-year follow-up only 6 of the 35 women in the study were taking hormone therapy.

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Carolyn Green, BHSc(PT), MSc
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Vancouver, BC

References

1. Lentle BC. Osteoporosis and bone densitometry: Does the emperor have clothes? *CMAJ* 1998;159(10):1261-4.

2. Green CJ, Bassett K, Foerster V, Kazanjian A. *Bone mineral density testing: Does the evidence support its selective use in well women?* Vancouver: BC Office of Health Technology Assessment, University of British Columbia; 1997. BCOHTA report no 97:2T. Available: www.chspr.ubc.ca
3. Ray NF, Chan JK, Thamer M, Melton LJ III. Medical expenditures for the treatment of osteoporotic fractures in the United States in 1995: report from the National Osteoporosis Foundation. *J Bone Miner Res* 1997;12(1):24-35.
4. De Laet CEDH, van Hout BA, Burger H, Hofman A, Pols HAP. Bone density and risk of hip fracture in men and women: cross sectional analysis. *BMJ* 1997;315:221-5.
5. Papaioannou A, Parkinson W, Adachi J, O'Connor A, Jolly EE, Tugwell P, et al. Women's decisions about hormone replacement therapy after education and bone densitometry. *CMAJ* 1998;159(10):1253-7.

[The author responds]:

My colleagues at the BCOHTA are entering into a debate about semantics. On page 93 of their report, they state that "[t]he available economic evaluations do not represent adequate evidence that BMD [bone mineral density] testing programs are more cost-effective than universal HT [hormone therapy] or no intervention."[1] I do not think I have misrepresented their opinion in stating that they found bone densitometry not to be cost-effective.[2] Similarly, on the basis of the results of the study by Alexandra Papaioannou and colleagues,[3] I believe that my comment that densitometry weakly influenced patient choice is fair.

There is a compelling need for technology assessment. However, the urgency of that need must not be allowed to conceal complexity. Fuchs and Garber[4] have argued that technology assessment should be a multidisciplinary undertaking, a point made cogent by the recent publication of an evidence-based review commissioned by the National Osteoporosis Foundation in the United States.[5] The conclusions reached by the authors — Dr. David Eddy, prominent in the evidence-based medicine movement, and his clinician colleagues, expert in the diagnosis and management of osteoporosis — are very different from those of the BCOHTA group.[1] They accept that "the disease is defined in practice by an intermediate outcome (BMD), not a health outcome (fracture)." The review goes on to suggest that "BMD testing is not usually indicated for perimenopausal women unless they have risk factors. At later ages (> 60–65 years), most women considering long-term treatments ... should be tested." There is a gulf between the two points of view. Anyone considering decision-making on behalf of patients should read the full report and examine the evidence tables. It is ironic that the review by Eddy and colleagues fails in some of the contexts in which the BCOHTA document, its misplaced ideology notwithstanding, is most effective.

At this point in the evolution of bone measurement the goal should be, first, to limit self-referral and overuse of bone densitometry. As evidence accumulates, the introduction of alternative, cheaper technology should be considered.[1] It is time to move on to these substantive issues.

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References

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2. Lentle BC. Osteoporosis and bone densitometry: Does the emperor have clothes? *CMAJ* 1998;159(10):1261-4.
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4. Fuchs VR, Garber AM. The new technology assessment. *N Engl J Med* 1990;323:673-7.
5. Eddy DM, Johnston CC, Cummings SR, Dawson Hughes B, Lindsay R, et al. Osteoporosis: review of the evidence for prevention, diagnosis and treatment and cost-effectiveness analysis. *Osteoporos Int* 1998;8:S1-S88.

Correction

Table 1 was inadvertently dropped from an article by Norman R.C. Campbell and colleagues in a recent *CMAJ* supplement concerning lifestyle modifications to prevent and control hypertension.[1] The table is reproduced here. We apologize for this error.

Reference

1. Campbell NRC, Burgess E, Choi BCK, Taylor G, Wilson E, Cléroux J, et al. Lifestyle modifications to prevent and control hypertension: 1. Methods and an overview of the Canadian recommendations. *CMAJ* 1999;160(9 Suppl):S1-S6.

Table 1: Levels of evidence for rating studies of treatment, prevention and quality assurance

Rank	Description
I	A randomized controlled trial (RCT) that demonstrates a statistically significant difference in at least one important outcome (e.g., survival or major illness). If the difference is not statistically significant, an RCT of adequate sample size to exclude a 25% difference in relative risk with 80% power, given the observed results
II	An RCT that does not meet the level I criteria
III	A nonrandomized trial with contemporaneous controls selected by some systematic method (i.e., not selected because an individual patient is perceived to be suitable for one of the treatment options), or a subgroup analysis of a randomized trial
IV	A before-and-after study or case series (of at least 10 patients) with historic controls or controls drawn from other studies
V	A case series (of at least 10 patients) without controls
VI	A case report (fewer than 10 patients)

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