

# How can you manage DKA without an ABG?

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**W**hen I first started in rural practice, I worked in a small 6-doctor hospital in northern Ontario. I had a patient with an acetylsalicylic acid overdose, and I remember ordering an arterial blood gas (ABG) analysis, only to be told that we didn't do them at the hospital. How could this be?

In the teaching hospital where I had trained the year before, the ABG analyzer ran 24 hours a day, and we were always running samples to it. How could I be expected to properly manage such a case without access to ABG?

I was all set to put forward a petition to have the hospital purchase a blood gas analyzer. Then I discussed the case with my colleagues, who told me that "you young types always say that we need blood gasses to manage, until you have managed without ABGs for a few months."

A few months later I realized that, as predicted by my colleagues, I could manage. This was true not only for acetylsalicylic acid toxicity, but also for diabetic ketoacidosis (DKA), asthma and a myriad of other conditions, now done without the comfort of an ABG determination.

Perhaps experience taught me to pay better attention to the respiratory rate, urinary ketones or the gestalt of how the patient looked, and I became a

better doctor for it. That's what I hope. What I fear is that the number needed to make a difference for blood gasses was larger than my experience, and that I became a worse doctor by merely accepting the opinion of my colleagues that ABGs were not needed.

I have subsequently worked in hospitals that had no on-site laboratory and had a visiting radiology technician 1 day a week, that still did obstetrics and some surgery, and I've worked in a hospital that, temporarily, had it all on site around the clock. I now have no question that rural doctors can function very well with vastly different levels of supporting diagnostic tools and other health professionals. Having said that, I admit that I am not good at taking radiographs myself and am glad to have the technician do it.

What are the inadequacies of personnel or equipment that actually limit patient care, and which resources are merely nice to have? Are we limiting students and residents by teaching them to function without these big-city staples, or are we expanding their knowledge and abilities?

The disturbing thing is that 20 years later, there is still a paucity, if not outright lack, of evidence of the clinical advantage (or absence thereof) of common medical tests, especially in the rural environment.