(Oakes, 2011).



FIG 5-7 Nurse programming a patient-controlled analgesia (PCA) pump to administer analgesia.

PCA infusion devices typically allow for three methods or modes of drug administration to be used alone or in combination:

- 1. Patient-administered boluses that can be infused only according to the preset amount and lockout interval (time between doses). More frequent attempts at self-administration may mean the patient needs the dose and time adjusted for better pain control.
- 2. Nurse-administered boluses that are typically used to give an initial loading dose to increase blood levels rapidly and to relieve breakthrough pain (pain not relieved with the usual programmed dose).
- 3. Continuous basal rate infusion that delivers a constant amount of analgesic and prevents pain from returning during those times,