

## Antenatal Home Care Program Postpartum Hypertension follow up: description of service delivery and a retrospective descriptive look at gestational hypertension in the postpartum



## AHCP overview

- ▶ Became a program in 1985
- ▶ First program to offer community alternative to hospital care for women who delivered at St Boniface Hospital
- ▶ Initially hypertensions of pregnancy the only condition followed
- ▶ Quickly proved to be a viable and safe alternative to hospitalization
- ▶ Expanded to include other conditions
- ▶ In 1993 expanded to Health Sciences Centre
- ▶ Presently, available to all Winnipeg Region women
- ▶ Hypertensive conditions of pregnancy=80% of all referrals

## Postpartum Hypertension follow up

- ▶ Prior to 2011, clients were discharged from AHCP when delivered
- ▶ Requests for continued monitoring could not be accommodated
- ▶ Clients continued to use AHCP BP monitors in the postpartum

## Literature review

- ▶ For up to 50% of women, gestational hypertension is a continuation of the antenatal condition
- ▶ BP peaks on day 3-6 postpartum
- ▶ Hypertension of pregnancy is the most common identifiable cause of pregnancy related intracerebral hemorrhage (ICH)
- ▶ Single Canadian study (2011) cites 8 ICH/100,000 deliveries
- ▶ Likelihood of stroke in gestational hypertension complicated pregnancy increases by six-to-nine fold
- ▶ Highest risk period: delivery and up to 2 weeks post delivery

## Postpartum hypertension follow up

- ▶ Factors that influenced implementation of AHCP postpartum follow up:
  - requests for continuation of AHCP hypertension service delivery in the postpartum
  - the increasing literature evidence that care related to hypertension in the postpartum is warranted

## Eligibility

- ▶ All women accepted to AHCP follow up are eligible
- ▶ Those on program immediately prior to delivery are automatically transferred to postpartum hypertension follow up once delivered
- ▶ If discharged before delivered, service provided if request communicated to AHCP by a health care provider

### Description of service delivery

- ▶ Preparation for follow up begins in the antenatal period
  - Explanation provided
  - Consent obtained
  - File for documentation of self monitoring provided

Service delivery begins when hospital postpartum referral is received

### Service delivery

- ▶ 3 pathways of follow up
  - Placement based on BP
  - moved to higher pathway if BP elevated
  - moved to lower pathway if BP in lower pathway for 48 hours (hrs)

### Service Delivery

- ▶ Pathway 1 BP  $\leq$  140/90
- ▶ 2 home visits
  - On day 5 and on discharge
  - Minimum of 1, more if needed, phone support calls
  - Discharge 10 postpartum
  - Client's file and BP monitor removed from home
  - Condition summary faxed to care providers

### Service delivery

- ▶ Pathway 2: BP 141/91–150/100
  - A minimum of 2 home visits–more if needed
    - On day 5 postpartum,
    - On discharge from follow up
  - Phone support every day until BP stabilized to pathway 1 levels
  - Discharge day 14 postpartum
  - Condition summary faxed to primary health care provider

### Service delivery

- ▶ Pathway 3: BP 151/101–160/110
- ▶ Minimum of 2 home visits per week–may be visited daily if needed
  - Phone support on all other days
  - Discharged on day 14 postpartum
  - if BP still an issue on day of discharge:
    - Consult with physician
    - Plan of care communicated to client
    - Condition summary faxed to primary care provider

### Postpartum hypertension follow up data: October 01, 2011–September 31/2013

- ▶ 279 clients completed postpartum hypertension follow up

### BP levels on discharge from hospital

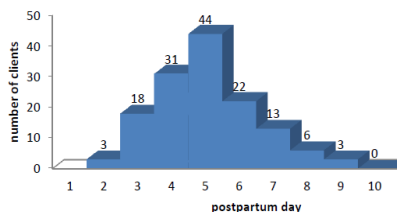
- ▶  $\leq 140/90=228$  clients (82%; N=279)
- ▶ 141/91-150/100=46 clients (16%; N=279)
- ▶ 151/101-160/110=5 clients (2%; N=279)
- ▶ \*Based on BP noted on hospital postpartum referral form

### Change in BP while on postpartum hypertension follow up

- ▶ BP  $\leq 140/90=107$  clients (38.3%; N=279)
  - 107 clients or 47% (N=228) remained normotensive
- ▶ BP 141/91-150/100=104 clients (37.3%; N=279)
  - 26 clients remained (57%; N=46)
  - 78 moved from normotensive group (34%; N=228)
- ▶ BP 151/101-160/110=68 clients (24.3%; N=279)
  - 5 clients remained (2%; N=279)
  - 43 moved from normotensive group (19%; N=228)
  - 20 moved from 141/91-150/100 group (43%; N=46)

### Postpartum day of pathway change

- ▶ 141 clients experienced elevated BP while on follow up
- ▶ 134 clients or 95 % experienced elevation of BP on day 3-8 postpartum



### BP 141/91-150/100

- ▶ 104 clients (37.3%; N=279)
  - ▶ 63 or 61% were on antihypertensive medication
  - ▶ 14 clients or 14% were started on medication
  - ▶ Total on medication=78 clients or 75%
- ▶ 42 nurse/Doctor consults (40%, N=104)
  - Start medication=14 clients (13%, N=104)
  - Increase medication=10 clients (10%, N=104)
  - No change=4
  - Decrease medication=14 (13%, N=104)
  - No triage visits in this group

### BP151/100-160/110

- ▶ Total=68 clients (24%, N=279)
- ▶ On antihypertensive medication=38 (56%, N=68)
- ▶ Start medication=19 (28%, N=68)
- ▶ Total clients on medication=57 clients (84%, N=68)
- ▶ Nurse/doctor consults=54 clients (79%, N=68)
  - Start medication=19 (28%, N=68)
  - Increase medication=21 (31%, N=68)
  - 0 change=14

### BP 151/100-160/110

- ▶ Triage visits=20 clients (30% N=68: 7% N=279)
  - BP range:152-181/96-117
  - Headache=13
  - S.O.B.=1
  - Dizzy=1
  - Jittery=1
  - 0 symptoms=4

### BP 151/100–160/110

- ▶ Outcome of triage visits:
  - Start medication, discharge home=6 (30%; N=20)
  - increase med., discharge home=5 (25%, N=20)
  - 0 change in management=2
  - Admit=7 (3%; N=279)

### Summary of admitted clients

- ▶ BP unknown—readmitted within 24 hrs with Sx of nausea and S.O.B, pulmonary edema—admit X4 days
- ▶ 162/105, 161/107, headache (h/a) –admit X2 days
- ▶ BP 155/104, 147/103, jittery and restless—admit X2 days
- ▶ 153/111, 165/107, h/a—admit X24 hrs
- ▶ 150/110, 150/109, 0 Sx of G.H. PPH, admit X24 hrs
- ▶ 153/104, 161/111, 0 Sx—admit X24 hrs
- ▶ BP 169/112, 149/117, h/a—admit X24 hrs

### BP distribution on discharge from follow up

- ▶  $\leq 140/90=223$  clients or 80 % (N=279)
  - 107 remained
  - 61 moved from 141/91–150/100 group (59%; N=104)
  - 55 moved from 151/101–160/110 group (81%; N=68)
- ▶ 141/91–150/100=54 clients or 19% (N=279)
  - 43 remained (41%; N=104)
  - 11 moved from 151/101–160/100 group (16%; N=68)
- ▶ 151/101–160/110=2 clients or 1% (N=279)

### Summary

- ▶ Overall of all clients followed, N=279
- ▶ 107 clients or 38% remained normotensive while on follow up
- ▶ 172 clients or 62% experienced elevated BP on f/u
  - 104 clients or 37% had BP readings 141/91–150/100
  - 68 clients or 24% had BP readings of 151/101–160/110 range
- ▶ Of those (N=172):
  - 96 clients or 56% (N=172) warranted nurse doctor consult
  - 31 clients or 18 % (N=172) start medication
  - 31 clients or 18% (N=172) increase medication
  - 34 clients or 20% (N=172) 0 change in management
  - 20 clients or 12% (N=172) assessment in triage
  - 7 clients or 4% (N=172) admitted to hospital
- ▶ 228 clients or 80% (N=228=79) were normotensive on discharge day 14 postpartum

### Implications for nursing practice

#### Provide hypertension related care in the postpartum

- ▶ Do manual BP reading on day 2 and day 5 postpartum
  - If BP is elevated, check BP a minimum of every second day until BP returns to normal levels
- ▶ Every pregnant client should be informed about relevant symptoms:
  - severe headache especially if headache is resistant to over-the-counter analgesia
  - Visual disturbances:
    - Blurred vision, flashing lights, double vision or floating spots
  - Nausea and/or vomiting
  - Malaise and breathlessness– Sx of pulmonary edema
  - Sudden swelling of face and hands

### Nursing implications

- ▶ For Winnipeg Region Women, client is to go to obstetrical triage if:
  - BP is 140/100 and client has symptoms
  - BP is >160/110 without symptoms

### Implications for Nursing Practice

- ▶ If clients are using their own BP monitors, correlate the monitor and ensure that manufacturer's instructions are being followed
  - Right size cuff size
  - Observe and/or discuss cuff placement
- ▶ If client is on antihypertensive medication, discuss:
  - medication spacing for optimum BP control
  - discuss symptoms of hypotension
    - Lightheadedness
    - dizziness
    - Fainting
    - Blurred vision
    - Nausea
    - Cold, clammy, pale skin

### Future directions

- ▶ 1. Continue to provide postpartum hypertension follow up to women who were on the AHCP
- ▶ 2. Expand the service to all women in the postpartum if indicated
- ▶ 3. Provide service beyond 14 days to women with severe hypertension (pathway3)

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