|                       | Number $\square \square \square \square - \square \square$ |
|-----------------------|--|
| (Municipal and county | administrative division code-                              |
|                       | institution serial number)                                 |

## Investigation on the prevention situation and influencing factors of ROP for medical institutions

| Investigation area: _      | City                         | District (County)               |                    |
|----------------------------|------------------------------|---------------------------------|--------------------|
| Name of investigation      | n institution:               |                                 |                    |
| Signature                  | ; Contact number             | ; Date                          |                    |
| 1. General information     | on of hospital               |                                 |                    |
| 1.1 Hospital class:        |                              |                                 |                    |
| $\square$ primary hospital | $\square$ secondary hospital | ☐ tertiary hospital ☐ u         | ndecided           |
| 1.2 Hospital grade:        |                              |                                 |                    |
| ☐ special-grade hosp       | oital $\square$ grade A      | □ grade B □ undecide            | ed                 |
| 1.3 Administrative le      | vel of hospital:             |                                 |                    |
| ☐ ministerial and pro      | vincial-level                | eture-level                     | □ county-level     |
|                            |                              |                                 |                    |
| 2. ROP prevention          | situation                    |                                 |                    |
| Status of Neonato          | ology Department and Nec     | onatal Intensive Care Unit (NIC | CU):               |
| Established time           | of Neonatology Departme      | nt, Established ti              | me of NICU         |
| 2.1 The number of be       | eds and service (Filling w   | rith numbers of year 2012)      |                    |
| Hospitalized patie         | ents of Neonatology Depa     | rtment:cases                    |                    |
| Total number of            | beds of Neonatology Do       | epartment:beds, ir              | ncluding number of |
| beds of NICU               |                              |                                 |                    |
|                            |                              | nent:beds, annual o             | delivery number    |
| ROP related serv           |                              |                                 | , <u>—</u>         |
|                            |                              | ure babies: cases               |                    |

| < 2500g (low-birth weight infant, LBW):                           | cases                               |       |  |  |  |
|---|-------------------------------------|-------|--|--|--|
| < 2000g (including very/extremely low birth weight                | ght infant):cases                   |       |  |  |  |
| < 1500g (very low birth weight infant, VLBW):cases                |                                     |       |  |  |  |
| < 1000g (extremely low birth weight infant, ELB                   | W):cases                            |       |  |  |  |
| 2.2 Personnel and training (Filling with numbers of               | f year 2012)                        |       |  |  |  |
| Numbers of doctors engaged in ROP screening:(if 'no', fill in 0)  |                                     |       |  |  |  |
| ROP related training:   |                                     |       |  |  |  |
| Neonatal physicianperson-time/year; C                             | Ophthalmologistperson-time          | /year |  |  |  |
| Hospital administratorsperson-time/ye                             | ear                                 |       |  |  |  |
| 2.3 Gross area of Neonatology Department (Filling                 | with numbers of year 2012)          |       |  |  |  |
| Total aream², including NICU                                      | m²                                  |       |  |  |  |
| 2.4 Specialized apparatuses of Neonatology Depart                 | ment (If 'yes', fill in the counts) |       |  |  |  |
| Negative pressure aspirator: $\square$ yes $\square$ no           | phototherapy box: ☐ yes             | □ no  |  |  |  |
| induction equipment (non-contact): $\ \square$ yes $\ \square$ no | mask: □ yes                         | □ no  |  |  |  |
| neonatal rescue platform: $\square$ yes $\square$ no              | incubator: □ yes                    | □ no  |  |  |  |
| recovery capsule: □yes □no  | infusion pump: $\square$ yes        | □no   |  |  |  |
| island of life: $\square$ yes $\square$ no                        | bedside X-ray machine: □yes         | □no   |  |  |  |
| transit cases: □yes □no   | high frequency ventilator: □yes     | □no   |  |  |  |
| conventional mechanical ventilator: ☐yes ☐no                      | nasal CPAP ventilator: □yes         | □no   |  |  |  |
| monitor: □yes □no hypo  | othermia therapy apparatus: □yes    | □no   |  |  |  |
| Nitric oxide therapy apparatus: ☐yes ☐no                          | transport ventilators : □yes        | □no   |  |  |  |
| infant hyperbaric oxygen chamber: $\square$ yes $\square$ no      | laryngoscope: □yes                  | □no   |  |  |  |
| glucometer: □yes □no  |                                     |       |  |  |  |
| T-piece resuscitator (accorded with 2011 recovery guid            | delines requirements): ☐yes ☐no     |       |  |  |  |
| 2.5 ROP related equipment (If 'yes', fill in the coun             | ats)                                |       |  |  |  |
| oxygen-air mixer: □yes □no  | oxygen concentration meter: □yes    | □no   |  |  |  |
| blood-gas analyzer: $\square$ yes $\square$ no                    |                                     |       |  |  |  |
| oxygen saturation monitor (Any containing oxygen sa               | turation determination): ☐ yes ☐ 1  | 10    |  |  |  |
| direct ophthalmoscopy: $\Box$ yes $\Box$ no                       | indirect ophthalmoscopy: □yes       | □no   |  |  |  |
| fundus digital camera: □yes □no co                                | ondensing therapy apparatus: □yes   | □no   |  |  |  |

| RatCam III: □yes □no  | fundus laser treatment instrument: $\square$ yes | □no          |
|---|--|--------------|
| Other diagnostic equipment for ROP                          |  |              |
| Newborn resuscitation equipment in the                      | delivery room and operating room:                |              |
| oxygen-air mixer: □yes □no                                  | compressed air: □yes                             | $\square$ no |
| T-piece resuscitator (accorded with 2011 red                | covery guidelines requirements): ☐yes            | $\square$ no |
| nosocomial transhipment: transport incubate                 | or: □yes □no                                     |              |
| Emergency transport equipment (Fill in                      | when hospital carries out newborn                |              |
| transshipment)  |  |              |
| compressed air: □yes □no                                    | compressed oxygen: □yes                          | □no          |
| transport ventilators : $\square$ yes $\square$ no          | transport incubator: □yes                        | □no          |
| infusion pump: □yes □no                                     | vehicle-mounted power interface : □yes           | □no          |
| vacuum device: □yes □no                                     | monitor: □yes                                    | □no          |
| oxygen-air mixer: □yes □no                                  |  |              |
| T-piece resuscitator (accorded with 2011 re                 | ecovery guidelines requirements): ☐ yes          | □ no         |
| 2.6 Technical projects undertaken                           |  |              |
| fiberoptic bronchoscopy: $\square$ yes $\square$ no         | cardiopulmonary monitoring: □yes                 | □no          |
| bedside blood gas analysis: □yes □no                        | double change: □yes                              | □no          |
| bedside cardiac color ultrasound: $\square$ yes $\square$ n | o bedside radiography: □ yes                     | □ no         |
| spiral CT vascular airway reconstruction: ☐ yes             | MRI: □ yes                                       | □ no         |
| mild hypothermia therapy: $\square$ yes $\square$ no        | ROP screening and treatment: ☐ yes               | □ no         |
| umbilical arteriovenous catheterization: $\square$ yes      | □ no PICC: □ yes                                 | □ no         |
| invasive artery blood pressure monitoring: ☐ ye             | es □ no CRRT: □ yes                              | □ no         |
| peritoneal dialysis: ☐ yes ☐ no                             | renal biopsy: □ yes                              | □ no         |
| esophageal PH value determination: ☐ yes ☐                  | ☐ no NO inhalation therapy: ☐ yes                | □ no         |
| PS replacement therapy: $\square$ yes $\square$ no          | mechanical ventilation: $\square$ yes            | □ no         |
| high freguency oscillatory ventilation: $\square$ yes       | □ no   |              |
| noninvasive nasal congestion assisted ventilation           | n: □ yes □ no                                    |              |
| high flow oxygen therapy: $\square$ yes $\square$ no        |  |              |
| closed thoracic drainage: $\square$ yes $\square$ no        | neonatal screening: □ yes                        | □ no         |
| neonatal surgery: $\square$ yes $\square$ no                | pediatric cardiothoracic surgery: ☐ yes          | □ no         |

## 2.7 ROP prevention situation: □ no 2.7.1 Conducting oxygen therapy monitoring: $\square$ yes 2.7.2 Conducting ROP screening: $\square$ yes Reasons for not carrying out ROP screening: ☐ Personnel shortage ☐ Funding shortage ☐ Space limitation ☐ Lack of concern ☐ Consider unnecessary ☐ Consider referral safer ☐ Insufficient input and output □ Others Time for carrying out ROP screening: Forms of screening cooperation: $\square$ conducted by doctors inside the hospital $\square$ engaging ☐ referral to other hospital experts outside the hospital Total number of ROP screening cases in 2010\_\_\_\_\_\_, positive cases\_\_\_\_\_\_ Positive cases over $\square$ period\_\_\_\_\_, including $\square$ period cases\_\_\_\_\_, $\square$ period cases\_\_\_\_\_ Total number of ROP screening cases in 2011\_\_\_\_\_\_, positive cases\_\_\_\_\_\_ Positive cases over $\square$ period , including $\square$ period cases , $\square$ period cases Total number of ROP screening cases in 2012\_\_\_\_\_\_, positive cases\_\_\_\_\_\_ Positive cases over □ period\_\_\_\_\_, including □ period cases\_\_\_\_\_, □ period cases\_\_\_\_\_ 2.7.3 ROP related referral and transshipment situation in the absence of ROP screening conditions: $\square$ referral at birth $\square$ referral when ROP is suspected $\square$ no referral at any time 2.7.4 ROP treatment referral situation in the absence of ROP treatment conditions: ☐ immediate referral when ROP is screened ☐ referral when ROP threshold is screened □ no referral ☐ main institution of referral 2.7.5 Conducting ROP laser treatment in 2012: $\square$ yes $\square$ no treatment cases ROP dispute cases ROP disputes (time, reason) 2.7.6 Conducting ROP condensate treatment in 2012: $\square$ yes $\square$ no treatment cases: \_\_\_\_\_ cases of IV period ROP\_\_\_\_\_ cases of V period ROP\_\_\_\_\_ ROP treatment way: ☐ separate $\square$ cooperative $\square$ others cooperative hospital and its level\_\_\_\_\_\_, cooperative way\_\_\_\_\_

2.7.7 Will the exact time and place of ROP screening be informed when the premature was discharged from the hospital without screening or discharged automatically:  $\Box$  yes  $\Box$  no

2.7.8 ROP screening mode (Please choose suitable mode for your hospital and give a brief explanation)
Mode 1: □ In cooperation with other hospitals to carry out ROP screening
Mode 2: □ Conducted by trained ophthalmologists inside the hospital
Mode 3: □ Executing diagnosis by ophthalmologist after fundus examination conducted by neonatal physician
Reason 1: □ No condition for ROP screening inside the hospital
Reason 2: □ Resource sharing
Reason 3: □ Ensure screening quality, including timeliness, accuracy and screening rate
Reason 4: □ Others

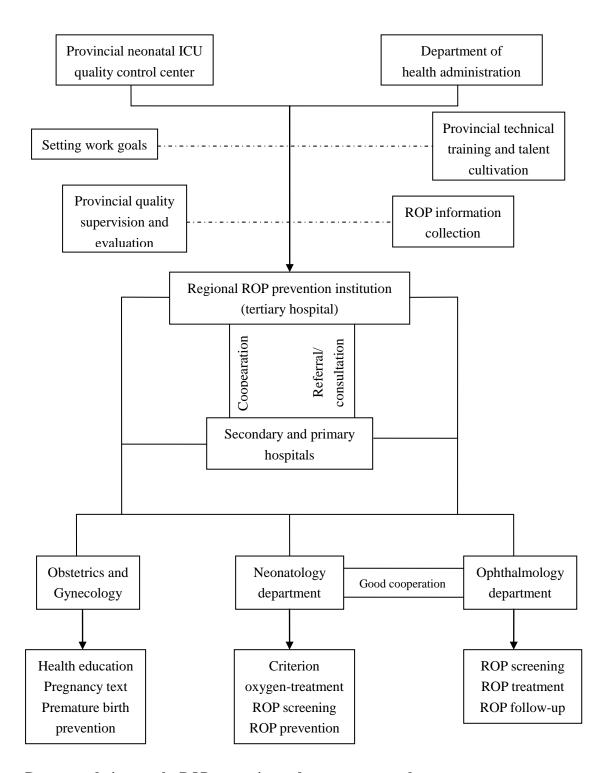
## 3. A feasibility investigation on the prevention and management mode of retinopathy of premature

The prevention and management mode of ROP, as one of the previous research results of our team, was designed based on the system management theory, as shown in the figure below. Please give brief advice on the existing problems and suggestions of the mode promotion in local area in combination with your own reality.

ROP prevention and management mode is as follows:

Health administrative agency and the provincial management center can formulate policies, system and goals, give support on the equipment and funding, cultivate ROP prevention professionals, and conduct quality evaluation and supervision on the regional ROP prevention institutions according to the reported information by network throughout the province.

Regional ROP prevention institutions, relied on the tertiary hospitals, can establish sound patient referral and consultation system and give guidance to the local hospitals for better ROP prevention. Department of neonatology and ophthalmology, in the context of a good cooperation, should work together on ROP screening, diagnosis, treatment and follow-up, while department of obstetrics and gynecology should make efforts for premature birth prevention, exhaustive pregnancy test and prenatal health education.



## Recommendations on the ROP prevention and management mode:

- 1. What do you think of the operability of this mode?
- 2. Do you think the mode is suitable for your own circumstances?
- 3. Do you have any suggestions for revision on this mode?
- 4. How many points will you give to this mode on a 100-point scale?
- 5. What do you think is the main barrier to the mode operation?